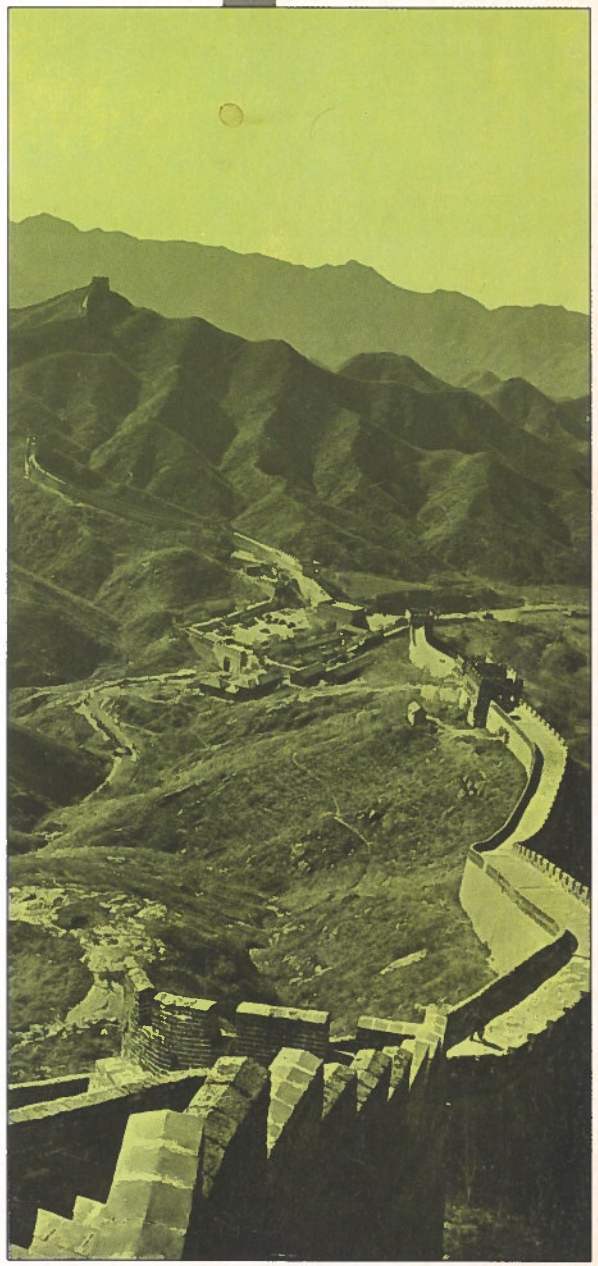
China in Maps



"ATLAS-H306" DENOYER-GEPPERT TIMES MIRROR 5235 Ravenswood Avenue, Chicago, Illinois 60640

China in Maps

Edited by
Harold Fullard M.Sc.
Cartographic Editor,
George Philip and Son, Ltd.

Contents

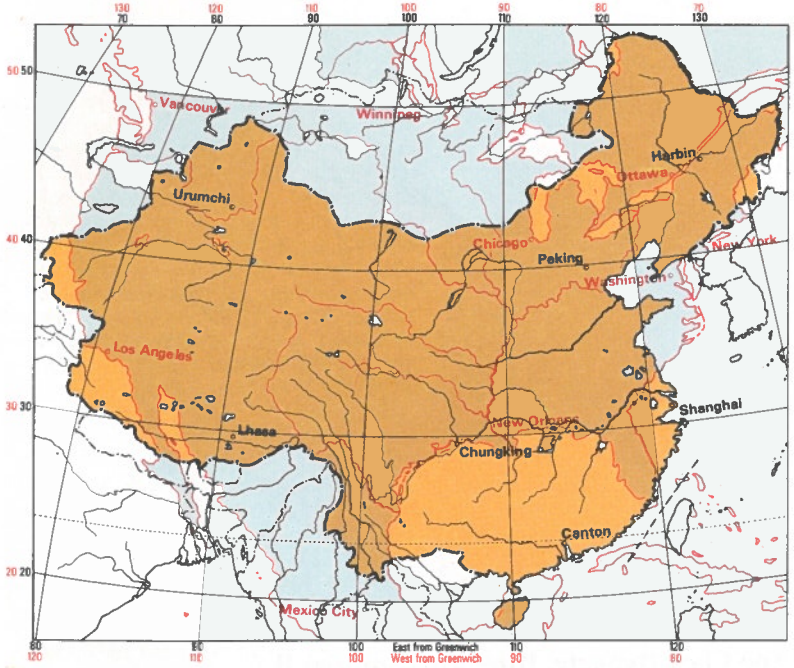
1 **China in the Modern World.**
2 **China, 1110–206B.C.**
China at the end of the Shang Dynasty, 1110B.C.
The Chou Dynasty, 11th–9th Centuries B.C.
The Contending States Period, c.350B.C.
The Ch'in Dynasty 255–206B.C.
3 **China, 206B.C.–1279A.D.**
The Earlier and Later Han Dynasties, 206B.C.–220A.D.
The Three Kingdoms, 220–265A.D.
The Sui and Tang Dynasties 581–906A.D.
The Southern Sung Dynasty, 1127–1279A.D.
4 **China, 1279–1644A.D.**
The Mongol Empire c.1300A.D.
The Mongol Dynasty 1279–1368A.D.
The Ming Dynasty, 1368–1644A.D.
5 **The Manchu Dynasty, 1644–1912A.D.**
6 **China, 1912–1935A.D.**
7 **China, 1935–1949A.D.**
8 **Political**
9 **Physical**
10 **Climate–I.**
Seasonal Temperature, Rainfall, Pressure and Winds
11 **Climate–II.**
Annual Precipitation, Frost-Free Periods, Typhoons and Depressions, Climatic Regions
12 **Vegetation, Soils, Structure and Geology**
13 **Agriculture–I.**
Land Use
14 **Agriculture–II.**
Wheat, Rice, Millet, Kaoliang, Soybeans, Maize, Barley, Sweet Potatoes.
15 **Agriculture–III.**
Sugar Cane, Sugar Beet, Cotton, Tea, Tobacco, Silk, Irrigation, Floods and Flood Control
16 **Minerals and Industry–I.**
Coal, Petroleum, Electricity, Iron and Steel.
17 **Minerals and Industry–II.**
Non-Ferrous Minerals, Chemicals, Machinery and Textiles.
18 **Population–I.**
Density of Population.
The Growth of Population.
19 **Population–II.**
Population Change, 1953–1957: Provinces.
Population Change, 1953–1958: Cities.
The Nationalities of China.
The Age of the Population.
The Employment of the Population.
20 **Central China:** Physical.
21 **Southern China:** Physical.
22 **Northern China:** Physical.
23 **Western China:** Physical.
24 **Communications.**
25 **Provinces: Area and Population, Foreign Trade.**

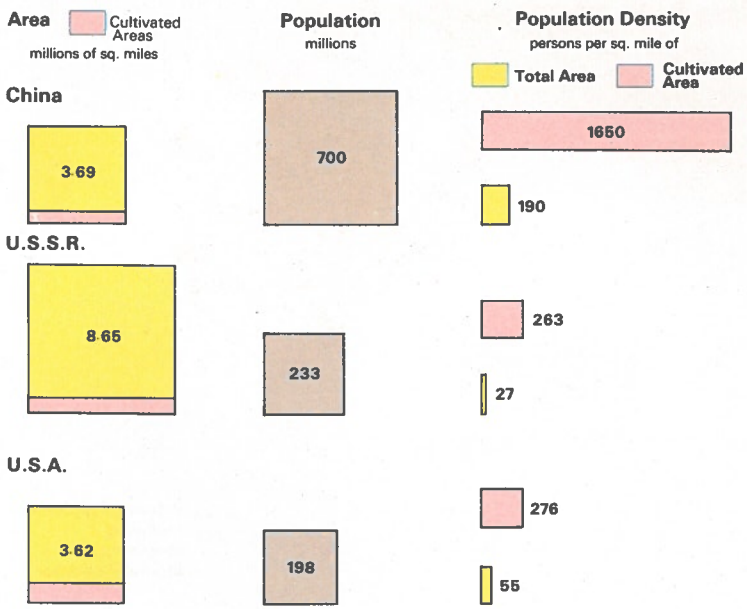
The entire contents of this atlas are copyright in all countries signatory to the Berne and Universal Copyright Conventions. Reproduction in part or in whole is strictly reserved to the proprietors, George Philip and Son, Ltd.

© 1968 George Philip & Son Limited, London. Printed in Great Britain by George Philip Printers Ltd.

中國圖說

China in Maps



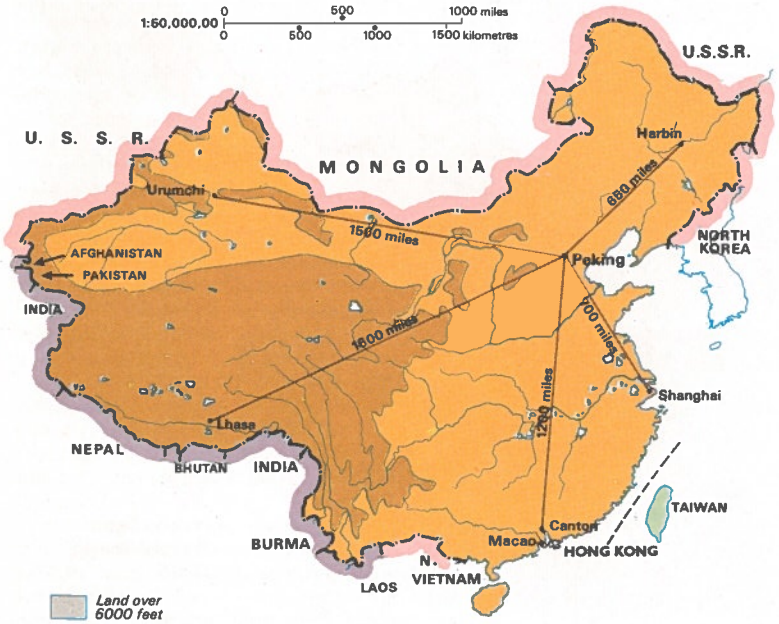


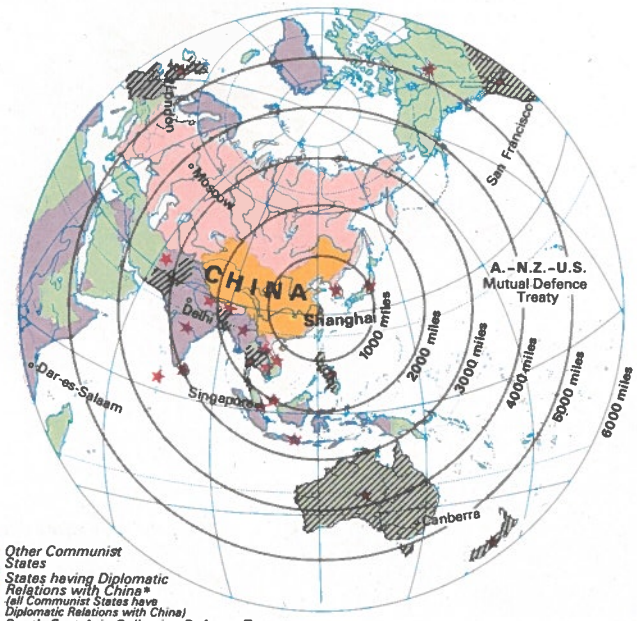
Modern China extends from tropical to temperate latitudes (18°N.–54°N.) and covers about 60 degrees of longitude. The latitudinal and longitudinal extent is similar to the United States and Mexico or the Mediterranean World. In area, China is one of the largest countries in the world (3,692,000 sq. miles), exceeded only by Russia and Canada, and about the same size as the United States (3,618,000 sq. miles) or Western Europe. The direct distance between Peking and Canton is 1,200 miles (approximately the same as London – Gibraltar) and between Shanghai and Urumchi is 2,000 miles (New York – Salt Lake City).

The mountains and deserts of the West and the seas to the east have protected China from invasion, but they have also isolated her from Asia and the world and many beneficial influences. In history, the boundaries of China have been pushed outwards as far as Western Russia and the Persian Gulf, but also, the country has been occupied physically by Japan, and economically by western trade and business interests. Since the Communist take-over of 1949, China has carried on a policy of fixing her 9,000 miles of landward boundaries by treaty with her twelve neighbours, and also of developing her western hinterland, and uniting it with lowland China by rails, roads and airways. Agreement has still to be reached with India and a state of war exists between the mainland and the nationalists in Taiwan.

China is one of the largest countries in the world, with the largest population, large agricultural and industrial resources and nuclear capability. Internationally, she has diplomatic and trade relations with only a few of the major powers, and she is not a member of the United Nations. Within her own realm she carries on a cold war with her northern communist neighbours, has fought India and is at war with Taiwan. She supported North Korea in the Korean War and tacitly supports North Vietnam in the war in Vietnam.

China today, as she has been practically throughout the whole of her history, is politically isolated.





Other Communist States

States having Diplomatic Relations with China* (all Communist States have Diplomatic Relations with China)

South-East Asia Collective Defence Treaty; member states

Colombo Plan for Co-operative Economic Development in S. & S.E. Asia; member states

* The following countries also have diplomatic relations with China: Algeria, Central Africa, Congo, (Braz.), Cuba, Dahomey, Guinea, Mali, Mauritania, Morocco and Zambia.

On this map, all distances from Shanghai, or through Shanghai, are true to scale, 1:250,000,000, or 1" = 4000 miles

COPYRIGHT GEORGE PHILIP & SON, LTD

2 China, 1110 – 206 B.C.

1:35,000,000 0 250 500 750 1000 miles; 0 250 500 750 1000 1250 1500 kilometres

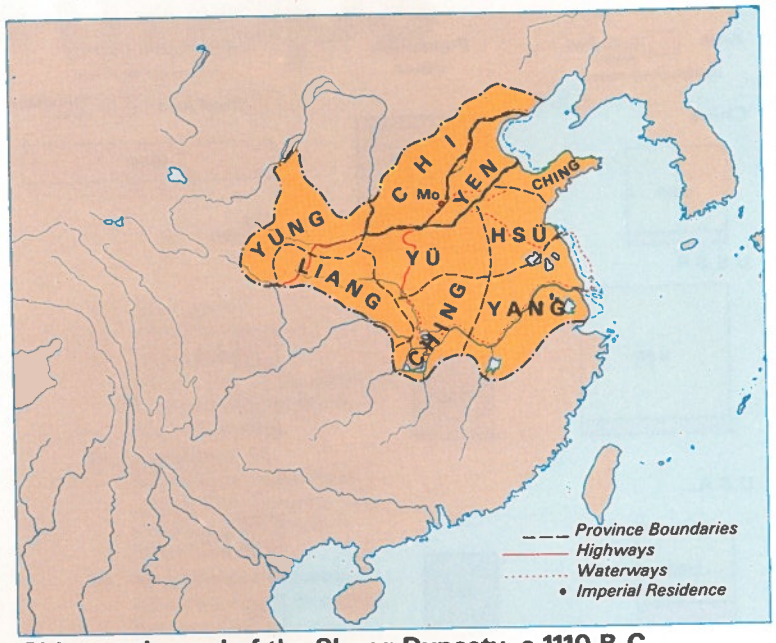
The Chinese have many myths and legends of supposed early rulers, and though the accuracy of the earliest of these is very doubtful, there is considerable archaeological evidence for the first dynasty, the Shang, lasting from about 1450–1054 B.C. The Shang capital, Mo, near the modern Anyang, was excavated in 1934–5, and revealed evidence of a highly organised society with a king at the head, an elaborate class system and a settled agricultural economy. The town was built on a planned site, with houses of pounded earth; stone and bone tools and highly decorated bronze vessels were found.

The Shang were conquered about 1054 B.C. by the Chou, a nomadic people whose small kingdom lay to the west of Shang. The Chou divided their new lands and gave them as fiefs to local chieftains, thus creating a feudal system. Agriculture developed, schools were established and literature flourished. The family was the basic unit, and religion was widely practised, with worship of ancestors and natural objects. Schools of philosophy grew, Confucius and Mencius being two of many who expounded theories of good government. Taoism also dates from this period.

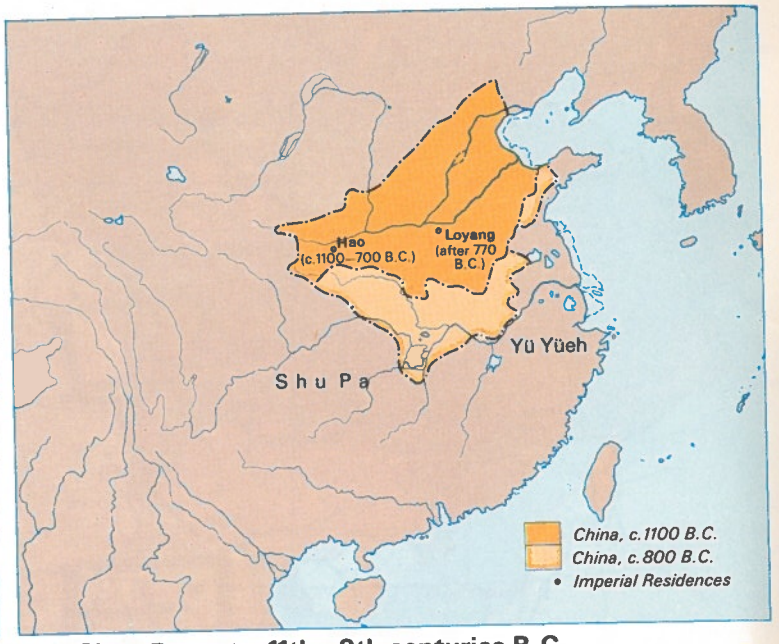
The early Chou emperors were very able, but later central control lapsed and the local chieftains ruled over virtually independent kingdoms. They fought constantly among themselves and the time from 770 B.C. is known as the 'contending states' period. There was also almost continuous warfare along the northern and western frontiers. The prince of Ch'in became the most powerful leader and by 255 B.C. the Chou emperor was forced to abdicate his throne to the Ch'in family.

The Ch'in abolished the Chou political system of feudal states, and divided the country into 36 provinces with civil and military governors directly responsible to the emperor. They extended China's boundaries towards the south coast, and in order to create a stable northern frontier, completed and made continuous the Great Wall.

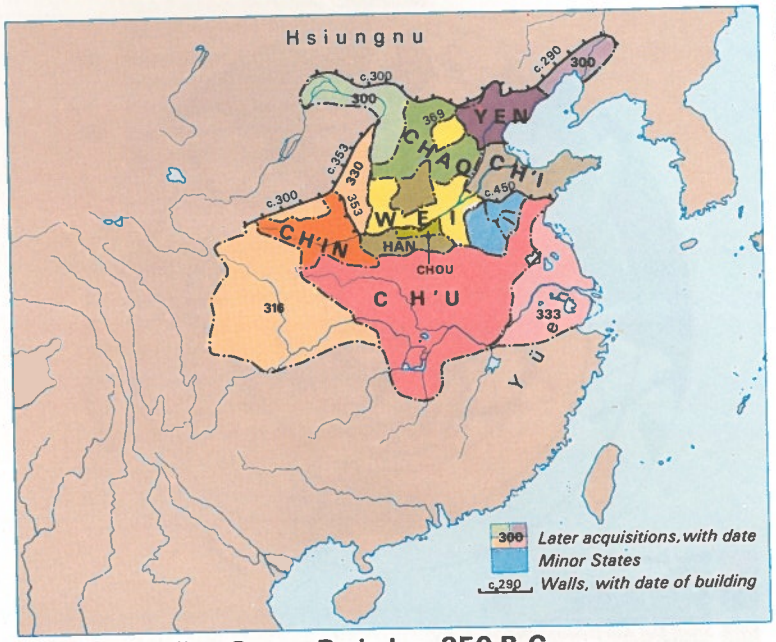
There was only one Ch'in emperor, who died in 210 B.C. His successor



China at the end of the Shang Dynasty, c.1110 B.C.



The Chou Dynasty, 11th—9th centuries B.C.



The Contending States Period, c. 350 B.C.

The Ch'in Dynasty, 255—206 B.C.

all maps after Herrmann

COPYRIGHT GEORGE PHILIP & SON, LTD.

was murdered in 207 B.C., and military chiefs fought for the throne. The victor, Lui Pang, founded the Han dynasty. At first members of the emperor's family were in charge of the main divisions of the country, but later a civil service developed. Under the Han, Chinese rule was extended to Sinkiang, to a larger area south of the Yangtze and to Korea, though much of this new territory was held only nominally. Trade was developed with central Asia, and this western contact brought Buddhism to China. There was an interruption in the Han dynasty from A.D. 8–23, and after this it is known as the Later or Eastern Han, because the capital was moved east, from Ch'ang-an to Loyang. The Han was one of the great dynasties of China, and art and literature flourished, but towards the end the imperial line declined and a period of disunity followed for three and a half centuries.

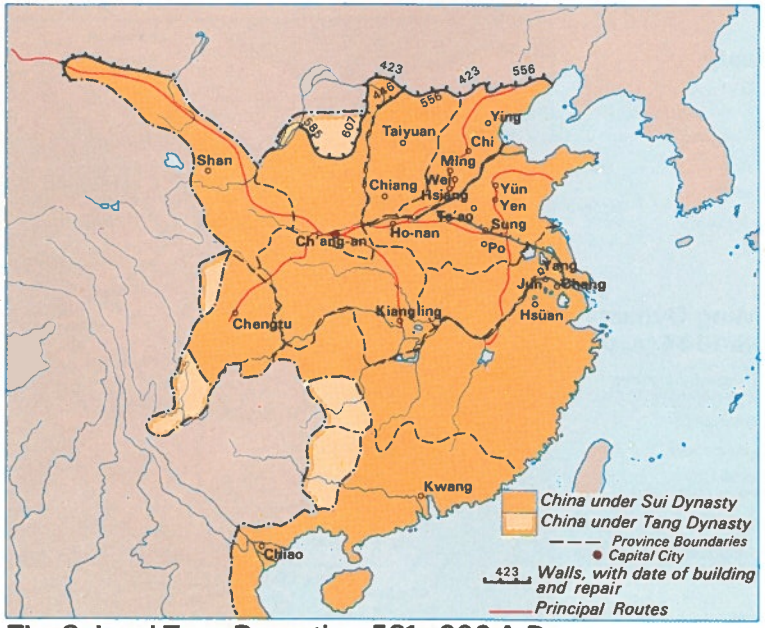
At first there were three kingdoms – Wei, Wu and Shu – and dominance fluctuated between these. Later there were as many as sixteen states, each fighting for control. Eventually in 581 union was achieved under the Sui dynasty, which lasted from 581–618, and then under the Tang, 618–906, who came from Shansi. Under the Tang, China became extremely powerful and administratively well organised. Many immigrants particularly Moslems from the north-west came to China, literature and painting flourished and printing started. Towards the end of the dynasty, invaders encroached on the borders and there were internal rebellions; the dynasty was ended by attacks from Manchuria in 906, and then five dynasties followed in rapid succession.

The Sung dynasty, founded in 960, succeeded in subduing most of the country, but invaders gradually encroached from the north, and Southern Sung emperors made Lin-an, just to the south of the Yangtze, their capital. The Mongols under Genghiz Khan invaded China early in the thirteenth century, and by 1223 controlled the area north of the Hwang Ho. After quarrelling with the Sung, they again advanced, and in 1279 Kublai Khan became emperor of all China.

1:35,000,000 0 250 500 750 1000 miles; 0 250 500 750 1000 1250 1500 kilometres

The Earlier and Later Han Dynasties, 206 B.C.—220 A.D.

The Three Kingdoms, 220—265 A.D.



The Sui and Tang Dynasties, 581—906 A.D.

The Southern Sung Dynasty, 1127—1279 A.D.

all maps after Herrmann

COPYRIGHT GEORGE PHILIP & SON, LTD

The Mongol Empire c.1300 A.D.

The Mongol Empire at its greatest extent c.1250

China c.1290

Boundaries of chief Mongol states (Khanates)

Route of Marco Polo 1271–95 A.D.

1:60,000,00

0 250 500 750 1000 miles

0 500 1000 1500 kilometres

The Mongol Dynasty 1279–1368 A.D.

Province Boundaries

Province Capital

Capital City

Principal Routes

The Ming Dynasty 1368–1644 A.D.

Province Boundaries

Province Capital

China c.1415

China c.1580

Capital City (Nanking 1368–1421)

Walls with date of building

Portuguese Trading Ports

1:35,000,000

0 250 500 750 miles

0 250 500 750 1000 kilometres

COPYRIGHT GEORGE PHILIP & SON LTD.

all maps after Herrmann

Kublai decided on Khanbalik, near Peking, as his capital, and from there he ruled over China and most of the vast Mongol Empire. China was treated as a conquest, and many foreign soldiers were brought in and aliens appointed to leading administrative posts. To improve communication, Kublai reconstructed the Grand Canal, begun centuries earlier.

The many foreigners who came to China introduced alien religions. There were Moslems, Dominican and Franciscan Friars, Nestorian Christians and Armenians. All exerted a considerable influence. The first West Europeans reached China about this time, among them Marco Polo, who was in Kublai's service for four years. Foreign trade flourished as never before, the vast area of Mongol rule providing greater security for travel.

After Kublai's death (1297), Mongol power rapidly declined. The huge empire disintegrated, trade routes became unsafe, and European traders and missionaries left China. In ensuing rebellions within China, the Mongols were expelled, and a former Buddhist monk became the first emperor of the Ming dynasty. Ming rule was efficient and China became prosperous, with Chinese culture restored after many years of foreign interruptions. The Ming excelled particularly in ceramics, and their products reached as far as Europe. Expeditions were sent to Java, Ceylon and the Persian Gulf; Korea was invaded and Annam acknowledged Chinese overlordship. Later, however, Japan invaded Korea, and ravaged China's coasts. Travellers from the west again visited China and new crops were introduced – cotton, maize, sweet potatoes and tobacco. The Portuguese reached the Far East in the sixteenth century, and became established at several ports. They were mostly expelled, but a permanent base was founded at Macao in 1557. Dutch and English traders also tried to make contact. A fresh wave of missionary activity reached China, Francis Xavier tried to enter the mainland, and before the end of the dynasty, Jesuits were established in several centres.

1: 25,000,000
0 200 400 600 800 miles
0 300 600 900 1200 kilometres
RUSSIAN EMPIRE
Amur
1689–1858 to China
1858 to Russia
MANCHURIA
Russian Occupation 1900–1905
under Japanese influence 1905
Chinese Eastern Railway
South Manchurian Railway
OUTER MONGOLIA
1697 under Chinese suzerainty
Dzungaria
1757 under Chinese suzerainty
1847 to Russia
INNER MONGOLIA
1635 under Chinese suzerainty
SINKIANG
1724–1866, 1878 under Chinese suzerainty
ALASHAN
KANSU
TSINGHAI
1724 under Chinese suzerainty
TIBET
1720 under Chinese suzerainty
NEPAL
1792–1908 under Chinese suzerainty
BHUTAN
SIKKIM
INDIA
(BRITISH EMPIRE)
BURMA
1769–1886 under Chinese suzerainty
SIAM
Laos
Fr. Prot. 1893
FRENCH INDO-CHINA
Annam
Fr. Prot. 1885
Tongking
Fr. Prot. 1884
SHENSI
SHANSI
CHIHLI
SHANTUNG
HONAN
ANHWEI
KIANGSU
HUPEH
SZECHWAN
KWEICHOW
YUNNAN
HUNAN
KIANGSI
CHEKIANG
FUKIEN
KWANGSI
KWANGTUNG
KOREA
1627–1895 under Chinese suzerainty
Japan 1895
Taiwan (Formosa)
to China 1683–1895
Taipei
Peking
Tientsin (1861)
Taku
Paoting
Newchwang (1864)
Chinwangtao (1901)
Port Arthur (1898 to Russia) (1905 to Japan)
Dairen (1907)
Antung (1907)
Pyongyang
Seoul
Mukden
Harbin (1909)
Vladivostok
Khabarovsk
Aigun (1909)
Hunchun (1910)
Lunchingtsun (1910)
Chefoo (1862)
Weihaiwei (Br. 1898)
Tsingtao (Ger. 1898)
Kiao (1899)
Taiyuan
Kaifeng
Sian
Ningsia
Lanchow
Sining
Urumchi
Kuldja
1871–81 to Russia
Kuchao
Hami
Kashger
Yarkand
Khotan
Ansi
Urga
Irkutsk
Nerchinsk
Kyakhta
Semipalatinsk
Hankow
Wuchang
Hanyang
Ichang (1877)
Shasi (1896)
Soochow (1896)
Shanghai (1854)
Chinkiang (1861)
Nanking (1899)
Wuhu (1877)
Anking
Kiukiang (1862)
Nanchang
Hangchow (1896)
Ningpo (1861)
Wenchow (1877)
Changsha (1904)
Wanhsien (1915)
Chengtu
Chungking (1891)
Lhasa
Yochow (1899)
Santuaho (1899)
Foochow (1861)
Amoy (1862)
Swatow (1860)
Canton (1859)
Hongmoon (1906)
Kowloon (1897)
Hong Kong (Br. 1842)
Macao (Port.) (1871)
Kwangchowwan (Fr. 1898)
Lappa (1871)
Kweiyang
Kweilin
Wuchow (1897)
Nanning (1907)
Lungchow (1889)
Pakhoi (1877)
Haiphong
Hanoi
Kiungchow (1876)
Tengyueh (1902)
Yunnan
Myitkyina
Szemao (1897)
Mengtsz (1889)
Calcutta
1905
1906
1907
1902
1897
1898
1891
1889
1877
1876
1862
1915
1904
1896
1899
1854
1860
1859
1906
1897
1842
1871
1898
1907
1889
1877
1876
1902
1897
1889
1891
1895

China, 1912–1935 A.D.

Sun Yat-sen was elected president of a provisional government in 1911. After the emperor's abdication in 1912, Sun resigned in favour of Yuan Shih-kai who aspired to found a new dynasty. A struggle ensued between Yuan and the more radical M.P.s who founded the Kuomintang (K.M.T.) in 1912. In 1913 Yuan outlawed the K.M.T. In 1914 Japan occupied part of Shantung and made 21 demands, which would have meant Japanese control of China. Yuan accepted the demands, but world protest led Japan to modify them. Yuan died in 1916 and political control began to disintegrate. Yuan's followers set up a government in Peking; the K.M.T. under Sun Yat-sen set up a rival one in Canton; but warlords held much of the country. Student agitation led to the formation of the Chinese Communist Party (C.C.P.) in 1921. Russia helped Sun Yat-sen to reorganise the K.M.T., to which Communists were admitted to help rebuild the country and free it from foreign invaders. Sun died in 1925. In 1926 the Nationalist forces under Chiang Kai-shek began a drive north, reaching Peking in 1928. Success led them to start a purge against the Communists. The coalition had always been under strain, now the rift was ensured.

Chiang's K.M.T. was now dominant, though in 1929 they had to fight northern warlords. They had little popular appeal, while the Communists had good social policies and were determined to resist the Japanese. Japan overran Manchuria in 1931 and set up the puppet state of Manchukuo. In 1933 they took over Jehol and infiltrated into N.E. China. K.M.T. policy was not to resist Japan until China's internal problems were settled. From 1930–34 they tried to destroy C.C.P. bases. The Communists had formed the Red Army in the south, and by 1930 controlled considerable areas there. In 1934 the K.M.T. drove the Communists out of their main base in Kiangsi. They began the Long March, fighting as they went, first west then north to Shensi, which they reached in October, 1935, and Mao Tse-tung emerged as the leader of the C.C.P.

COPYRIGHT GEORGE PHILIP & SON LTD.

The army sent by the K.M.T. to renew the fight against the C.C.P. in Shensi, was more interested in joining the Communists in their attempt to drive out Japan. Chiang Kai-shek was imprisoned by the leader of this army in 1936, and was released only after agreement with Chou En-lai that the K.M.T. would co-operate with the C.C.P. In 1937 came the full-scale Japanese invasion of China, and despite brave resistance the Japanese took much of the north-eastern provinces before the end of the year. They set up puppet governments in Peking and Nanking, while the Chinese headquarters moved west, first to Hankow, then Chungking. As the war progressed the Communists took over the initiative in defence, and became practised in guerilla warfare in the occupied areas, at the same time converting the peasants to the Communist cause.

After the Japanese surrender in 1945, the Communists hoped to take control of those provinces in which they had operated. But with American aid the Nationalists, as the legally constituted government, took surrender of all the Japanese garrisons. The Americans provided airlifts to the north, and thus the K.M.T. gained control of the key points. America also tried to negotiate a settlement between Communists and Nationalists, but despite this open war was resumed in 1946. The Communists used the guerilla tactics they had perfected against Japan, and by 1948 had won control of Manchuria and much of the north. In the south the Nationalists were in difficulties with inflation and increasing lack of public support. Nationalist generals defected to the Communists and Peking was handed over intact in January, 1949. The renamed People's Liberation Army began a southward march in April. They met little resistance, and the People's Government was established in Peking on 2nd October. Chiang Kai-shek fled with his government to Taiwan in December, and declared Taipei to be the Nationalist capital. The nationalists continue to occupy Taiwan and the off-shore islands of Quemoy and Matsu in a state of military preparedness.

COPYRIGHT. GEORGE PHILIP & SON. LTD

COPYRIGHT GEORGE PHILIP & SON, LTD

China shares 9,000 miles of land frontier with twelve nations. At a number of points there have been frontier disputes between China and her neighbours, and one with India developed into a war in 1962. To seaward, within 500 miles lie South Korea, Japan, Taiwan, the Philippines as well as the Ryukyu Islands occupied by the United States. Nationalist China (Taiwan) also occupies the islands of Quemoy and Matsu, close to the mainland. Macao (Portugal) and Hong Kong (U.K.) on the mainland are leased to foreign powers.

The administrative organisation of China was changed after the Communist revolution of 1949, and has been reorganised on a number of occasions since. At various times the large economic and political regions, composed of a number of provinces, have been formed but then abolished. The first order administrative units are the provinces (21), Autonomous Regions (5) and the centrally administered cities of Peking and Shanghai. The provinces are divided into *hsiens* (*c.* 1,500) and important cities (*c.* 150). Before 1958 the *hsiens* were further divided into *hsiangs* (rural districts) and small towns, but these have been replaced by communes. Various types of agricultural co-operation were tried leading to the establishment of the first commune at Weihsin (Honan) in April 1958. By the end of that year nearly all the rural population had been organised into some 26,500 communes. A small town and the surrounding *hsiangs* formed a typical commune, and on an average there are about fourteen communes in each *hsien*. Communes have also been formed in the urban areas.

The equality of the different peoples is recognised within the constitution, in so far as this is compatible with their inseparability from the People's Republic. The larger concentrated groups of peoples are organised into Autonomous Regions, and even the smaller groups occupying just a *hsien* have a measure of autonomy. The Autonomous Regions make up nearly half the total area of China, but their population forms only a twentieth of the whole.

COPYRIGHT GEORGE PHILIP & SON, LTD.

China can be divided into the high plateaux and basins of the west and north, areas of inland drainage, and the hills and plains of the east and south, which are drained by the easterly flowing main rivers of China.

In the west, high ranges divide the land into a series of plateaux and basins. The Himalayas, Kara Koram and Kunlun Shan surround the high Plateau of Tibet. In the east and south-east of the plateau the headwaters of some of the large Chinese and South-east Asian rivers cut deeply into the surface. To the north-east lies Tsaidam basin and northwards from the Tibetan plateau the land falls rapidly from about 12,000 to 6,000 ft. into the easterly sloping Tarim basin, at the centre of which lies the desert of Takla Makan. To the north-east is the Turfan depression which descends to below sea-level (–505 ft.). Further north and with much land below 1,000 ft. is the basin of Dzungaria. In the north of China and stretching northwards into Mongolia are the desert and plateau lands of the Gobi.

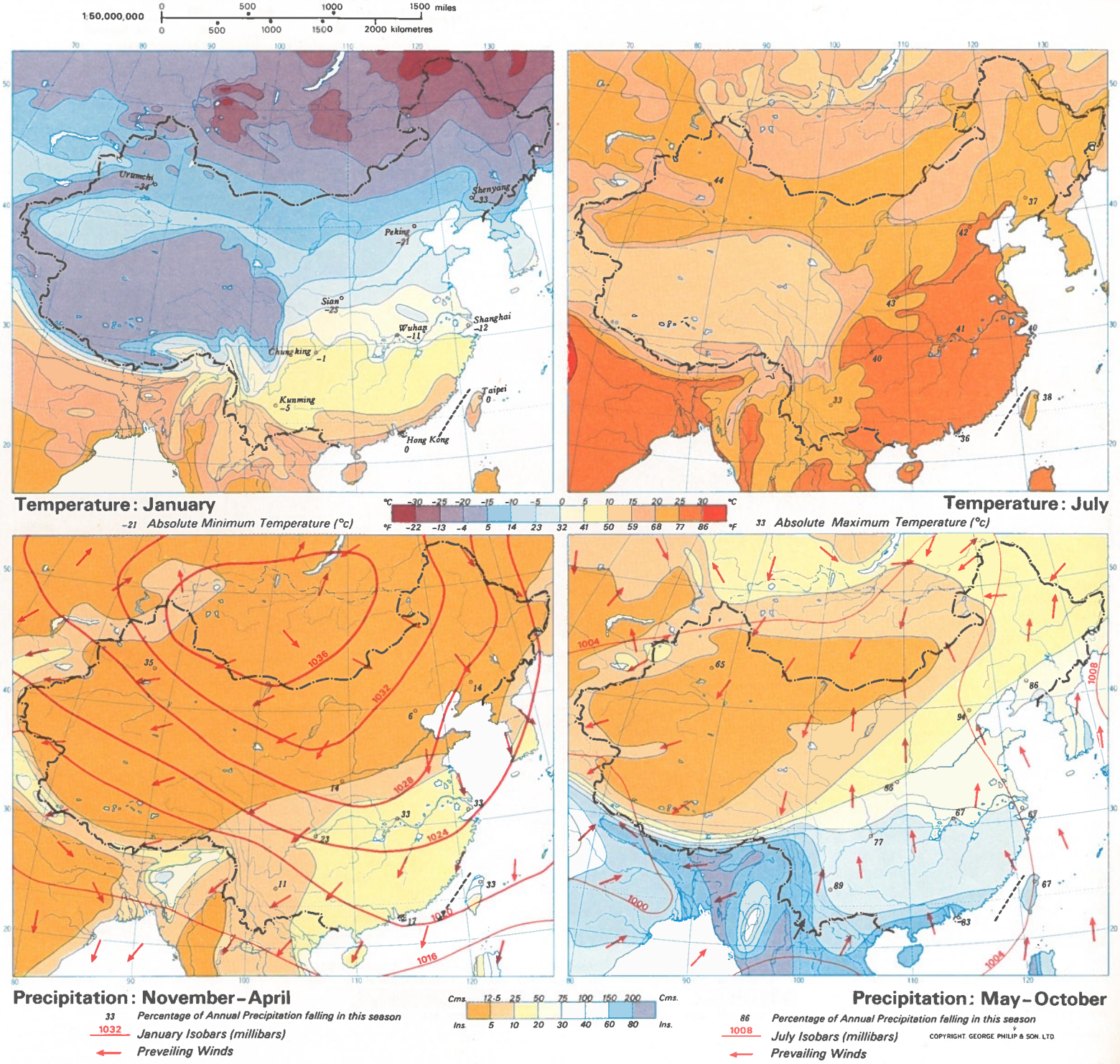
The remainder of China, 'China Proper' as it has been termed, is made up of river valleys and low intervening hills. In the north the Manchurian plain is drained by the Sungari flowing to the north and the Liao to the south into Liaotung Gulf. The Hwang Ho leaves the Tibetan plateau and flows in a great loop through the Ordos desert, and on meeting the Wei flows eastwards across its great flood plain into the Gulf of Po Hai, although throughout history it has chosen many courses to the sea. The Tsinling Shan form the watershed between the Hwang Ho and the Yangtze. The Yangtze, after leaving its mountain course flows first through the large basin of Szechwan, then through its central basin, with its many lakes, and so into the East China Sea. The southern watershed of the Yangtze is formed by the Nanling Shan and the South-east Uplands. The Si Kiang drains southern China. The large islands of Hainan and Taiwan lie off the southern coast and beyond these the shallow seas drop deeply into the Pacific and South China Seas.

The size, altitudinal range and latitudinal extent of China make for great contrasts in the climate.

In January in the extreme south of China the mean monthly temperature is 15°C–20°C. In lowland China the temperature decreases northwards and Peking is below freezing point. Ice forms in the Gulf of Po Hai. Further north and in the high mountains and plateaux of the west the winter is very cold. The Szechwan basin, nearly 1,000 miles inland but sheltered by the Tapa Shan from the cold north-easterly winds, is warmer than the lower Yangtze at this season. In summer, the temperature contrasts are not as great, the whole of Eastern China being affected by the warm humid flow of air from the south; Hong Kong, Chungking, Peking and Urumchi have about the same mean monthly temperature for July. Some of the mountains of Tibet remain below freezing even in the summer.

Southern China and Szechwan have almost no frosts and plant growth goes on for the whole year. Further north the frost-free period decreases and much of Tibet, Sinkiang and Mongolia have only a third of the year free from frost.

The pole of the Asiatic winter high pressure lies over Mongolia. This becomes established by November and leads to strong dry and cold north-westerly, northerly and north-easterly winds over China. The constancy of these winds is punctuated by depressions moving eastwards down the Yangtze, bringing a welcome break from the cold. By April or May the Asian high pressure begins to give way to a shallow low centred over South Asia, and southern China begins to experience a southern warm and moist airstream, which is fully established over the whole of China by July or August. The pressure gradient is nowhere nearly so intense as in the winter and the winds are much lighter. Typhoons, or intense low pressure disturbances affect China mainly between July and September. These brings winds of hurricane force, high seas and heavy rain, moving from east of the Philippines and usually striking Taiwan and the mainland coast between Hainan and the Yangtze, though they do not usually penetrate far inland. By November, the Asiatic high pressure is re-established.

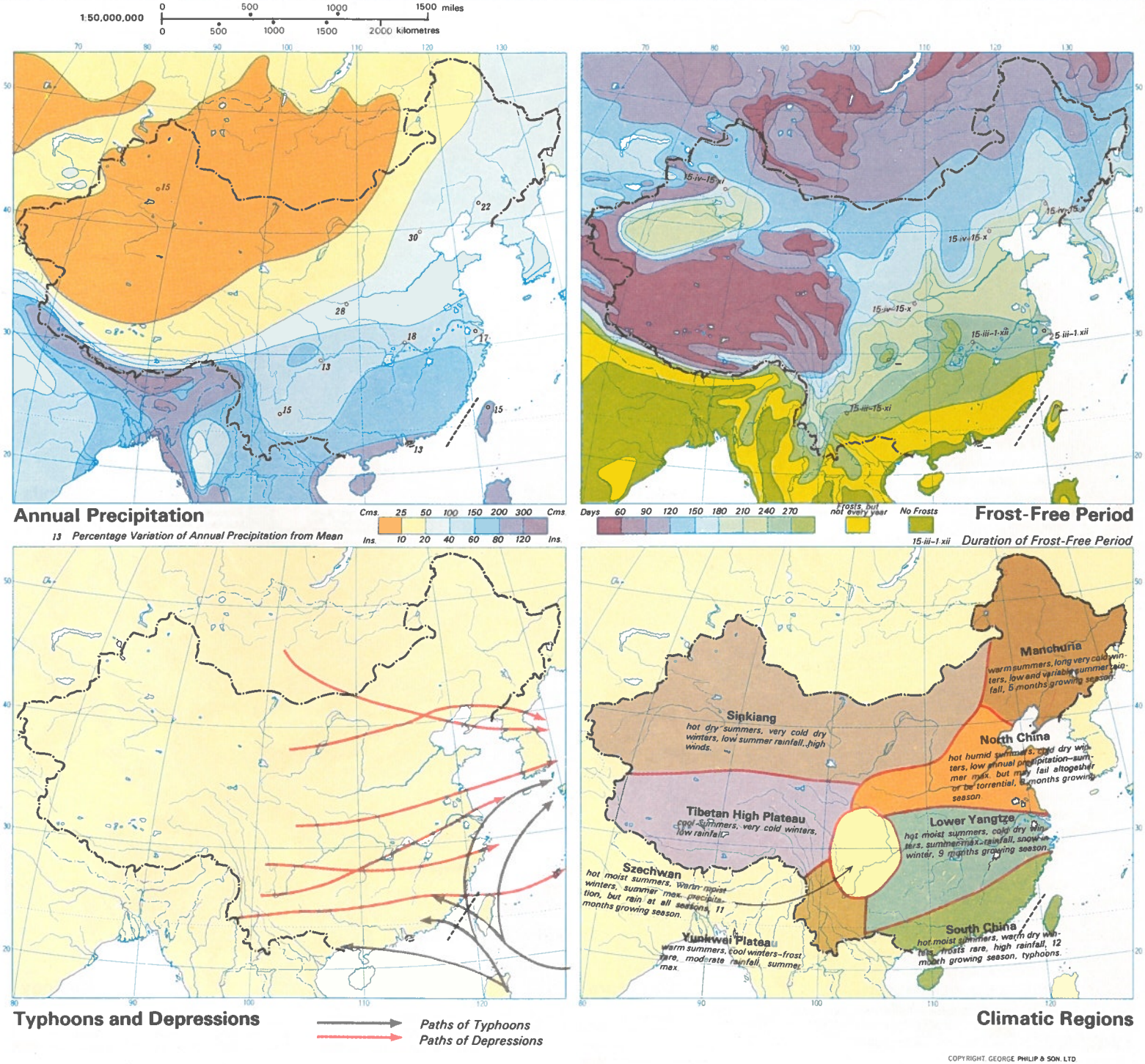

1:50,000,000
0 500 1000 1500 miles
0 500 1000 1500 2000 kilometres
Urumchi -34
Shenyang -33
Peking -21
Sian -25
Wuhan -11
Shanghai -12
Chung king -1
Kunming -5
Taipei 0
Hong Kong 0
Temperature: January
-21 Absolute Minimum Temperature (°c)
°C -30 -25 -20 -15 -10 -5 0 5 10 15 20 25 30 °C
°F -22 -13 -4 5 14 23 32 41 50 59 68 77 86 °F
Temperature: July
33 Absolute Maximum Temperature (°c)
Precipitation: November–April
33 Percentage of Annual Precipitation falling in this season
1032 January Isobars (millibars)
Prevailing Winds
Cms. 12·5 25 50 75 100 150 200 Cms.
Ins. 5 10 20 30 40 60 80 Ins.
Precipitation: May–October
86 Percentage of Annual Precipitation falling in this season
1008 July Isobars (millibars)
Prevailing Winds

COPYRIGHT GEORGE PHILIP & SON, LTD

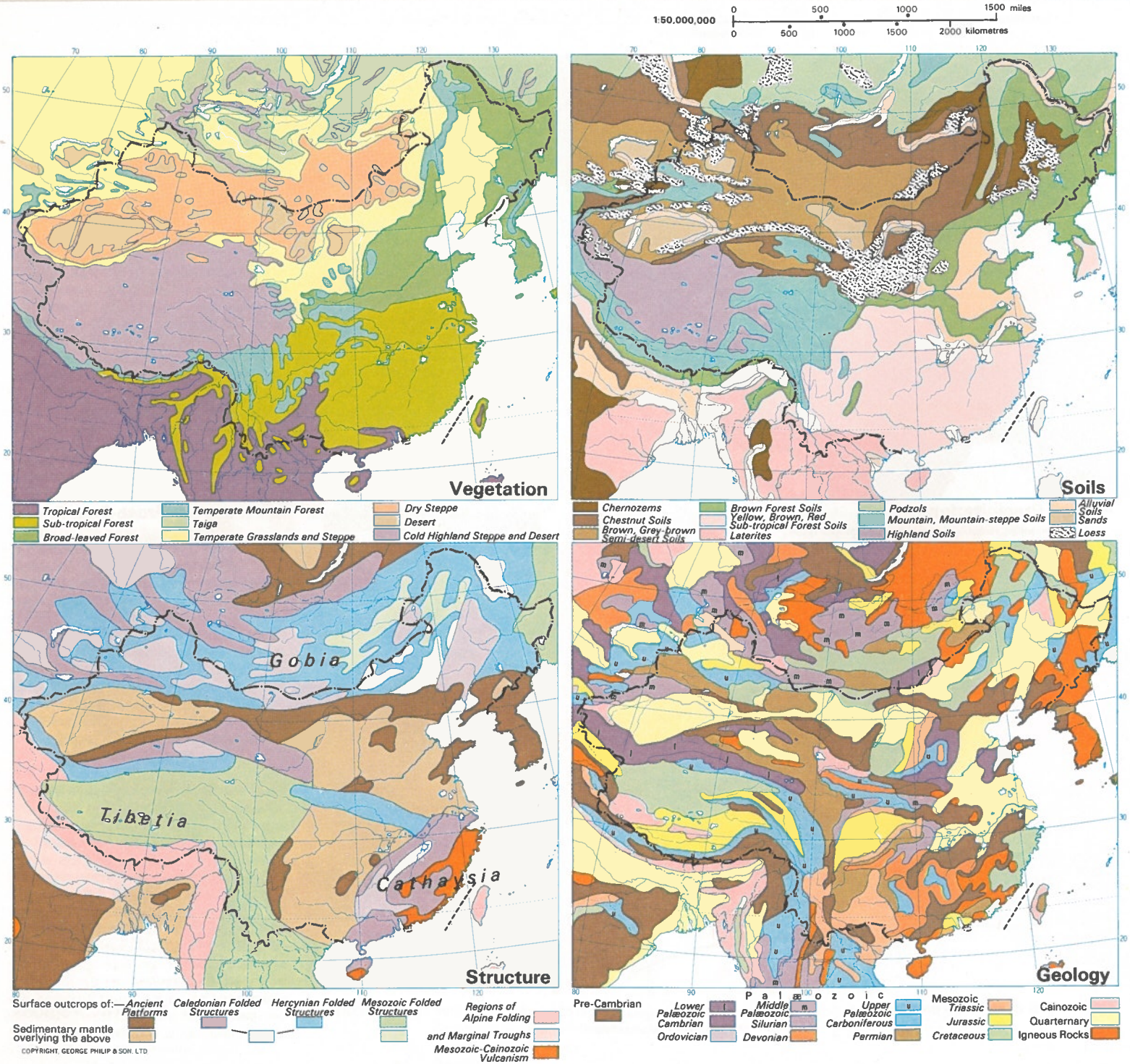
South of the Yangtze all areas receive over 50 inches of rain per year. North of the Hwang Ho and in most of the west, under 20 inches is experienced and large semi-arid areas and deserts occur. Everywhere, but particularly in the north, a large percentage of the precipitation falls in the summer months owing to the inflow from the Pacific of moist air uplifted by the southern hills and the colder air of the Yangtze depressions, and also owing to the typhoons. Unfortunately, as the annual precipitation decreases from roughly south-east to north-west, so the variability increases. The seasonal concentration of precipitation, with thunderstorms and typhoons, can lead to extensive flooding, soil erosion and crop damage; where the annual precipitation is low, it may fail altogether in one or even consecutive years and famine results.

The broad pattern of climatic regions formed by these varying climatic elements is shown on the last map on this page.

Ancient pre-Cambrian rocks are exposed at the surface in many areas of China and represent the remains of the three stable land massifs (Tibetia, Gobia and Cathaysia) which have controlled the tectonic movements of the area. In early Palaeozoic times a large N.E.–S.W. depression was established stretching between Manchuria and Burma, separating Cathaysia from Tibetia and Gobia. In Ordovician times the land to the south of a line following the present Tsinling Shan began to sink and became submerged while the land to the north was uplifted. The Caledonian earth movements (Silurian/Dev.) affected south-east China and northern Tibet. In Carboniferous times, the southern sea extended over northern China as a shallow sea, and the northern coalfields were formed. The whole of China was disturbed by the Hercynian orogeny (Carbo./Permian) which created such east-west mountain systems as the Kunlun, Tien Shan, Nan Shan and Tsinling Shan. In early Mesozoic times south-west China was submerged, but by the Cretaceous period, earth movements emphasised the Hercynian trend lines and affected newer areas in the


1:50,000,000
0 500 1000 1500 miles
0 500 1000 1500 2000 kilometres
Annual Precipitation
13 Percentage Variation of Annual Precipitation from Mean
Cms. 25 50 100 150 200 300 Cms.
Ins. 10 20 40 60 80 120 Ins.
Frost-Free Period
Days 60 90 120 150 180 210 240 270
Frosts but not every year
No Frosts
15 iii–1 xii Duration of Frost-Free Period
Typhoons and Depressions
Paths of Typhoons
Paths of Depressions
Climatic Regions
Manchuria
warm summers, long very cold winters, low and variable summer rain-fall, 5 months growing season
Sinkiang
hot dry summers, very cold dry winters, low summer rainfall, high winds.
North China
hot humid summers, cold dry winters, low annual precipitation–summer max. but may fail altogether or be torrential, 8 months growing season
Tibetan High Plateau
cool summers, very cold winters, low rainfall
Lower Yangtze
hot moist summers, cold dry winters, summer max. rainfall, snow in winter, 9 months growing season.
Szechwan
hot moist summers, warm moist winters, summer max. precipitation, but rain at all seasons, 11 months growing season.
Yunkwei Plateau
warm summers, cool winters–frost rare, moderate rainfall, summer max.
South China
hot moist summers, warm dry winters, frosts rare, high rainfall, 12 month growing season, typhoons.

COPYRIGHT GEORGE PHILIP & SON, LTD.



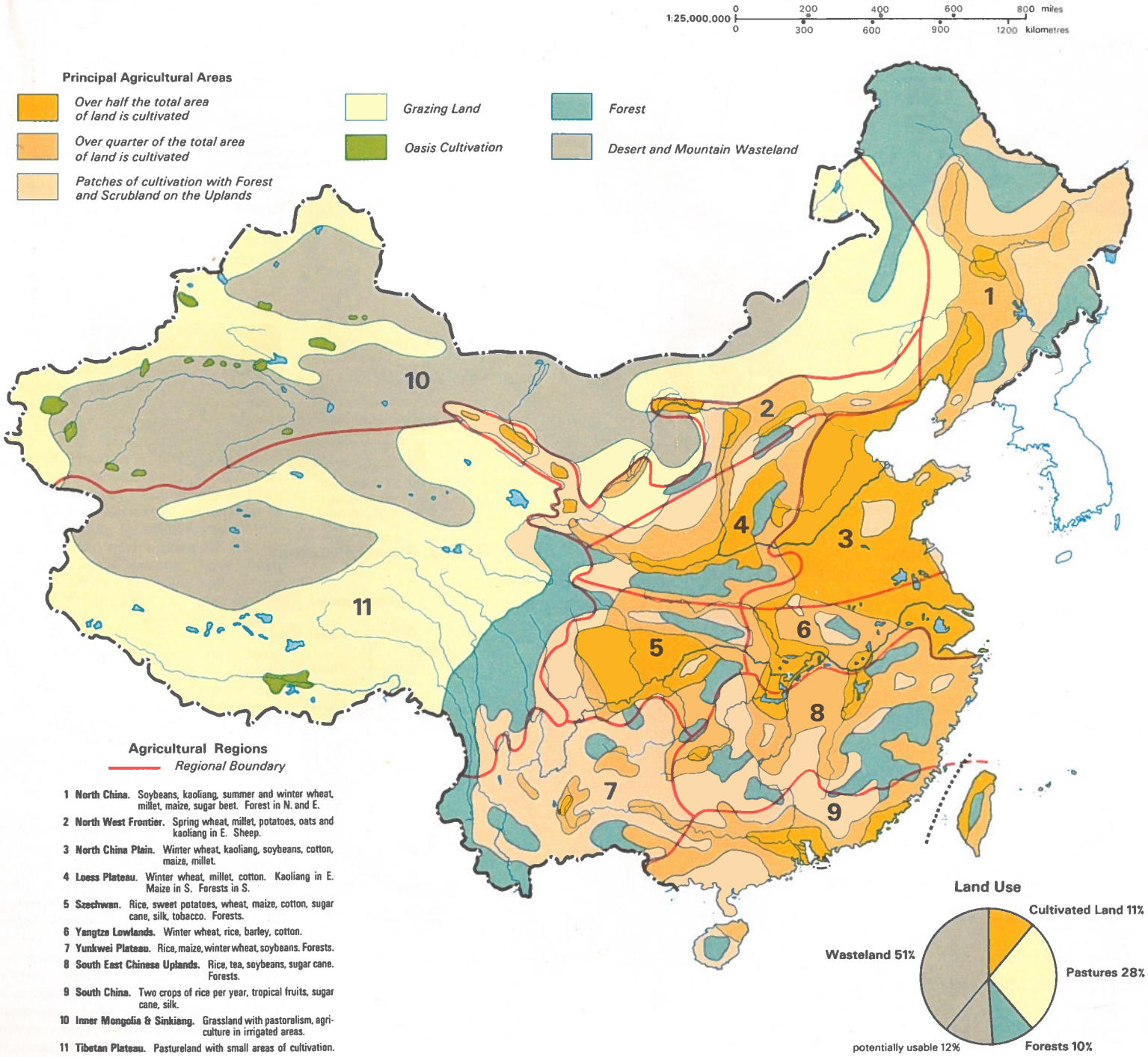
COPYRIGHT, GEORGE PHILIP & SON, LTD

south-west and Tibet. The Tertiary (Alpine) movements only affected the Himalayas. An ice sheet stretched over the western highland areas in Quaternary times, and at about the same time the loess, a wind blown deposit was laid down in northern China.

The soils of China are broadly divisible into two groups. In the north the lime-rich soils (Pedocals) of the grasslands combine high fertility unfortunately with low and variable rainfall. The richest soils are the Chernozems of western Manchuria, but the fertility decreases with the decreasing grass cover and rainfall. The soils of the rest of northern China are the alluvial soils of the Hwang Ho delta and the brown podzolic soils resulting from moderate rainfall and forest cover. Southern China has highly leached, acid, yellow-red soils associated with sub-tropical and tropical forests. The line separating the Rice and Wheat areas roughly follows the boundary between the yellow-red (Rice) soils and those of the north (Wheat).

Soil erosion by wind and water is a serious problem in China. The rich, heavily cultivated delta lands are made up from soils washed away by the headwaters of the main river. The Hwang Ho – Yellow River – is justly named; it flows through the loess, where the natural vegetation has been cleared for cultivation and much of the rain falls in heavy downpours washing away the fine soil, and deposits it in its delta. In southern China much of the woodland cover of the hills has been used commercially or as fuel or even annually burnt over. Terracing, reservoirs, shelter belts and afforestation, deep ploughing and the planting of soil fixing legumes are methods used to combat erosion.

In eastern China, with centuries of cultivation and timber felling, little remains of the natural vegetation. A line running N.E.–S.W. divides the forest from the grass and desert lands in the north-west. The Tsinling Shan divide the tropical and sub-tropical from the broadleaved forest of the northern plains. With decreasing rainfall or increasing altitude in the west and north-west grassland steppe, dry steppe and desert are found.


1:25,000,000
0 200 400 600 800 miles
0 300 600 900 1200 kilometres
Principal Agricultural Areas
Over half the total area of land is cultivated
Over quarter of the total area of land is cultivated
Patches of cultivation with Forest and Scrubland on the Uplands
Grazing Land
Oasis Cultivation
Forest
Desert and Mountain Wasteland
1
2
3
4
5
6
7
8
9
10
11
Agricultural Regions
Regional Boundary
1 North China. Soybeans, kaoliang, summer and winter wheat, millet, maize, sugar beet. Forest in N. and E.
2 North West Frontier. Spring wheat, millet, potatoes, oats and kaoliang in E. Sheep.
3 North China Plain. Winter wheat, kaoliang, soybeans, cotton, maize, millet.
4 Loess Plateau. Winter wheat, millet, cotton. Kaoliang in E. Maize in S. Forests in S.
5 Szechwan. Rice, sweet potatoes, wheat, maize, cotton, sugar cane, silk, tobacco. Forests.
6 Yangtze Lowlands. Winter wheat, rice, barley, cotton.
7 Yunkwei Plateau. Rice, maize, winter wheat, soybeans. Forests.
8 South East Chinese Uplands. Rice, tea, soybeans, sugar cane. Forests.
9 South China. Two crops of rice per year, tropical fruits, sugar cane, silk.
10 Inner Mongolia & Sinkiang. Grassland with pastoralism, agriculture in irrigated areas.
11 Tibetan Plateau. Pastureland with small areas of cultivation.
Land Use
Cultivated Land 11%
Pastures 28%
Forests 10%
potentially usable 12%
Wasteland 51%

COPYRIGHT GEORGE PHILIP & SON LTD

Only about ten per cent of China's total area is cultivated. Ten per cent is forested, about thirty per cent is pasture and the remainder, about half, is mountainous and desert wasteland, although perhaps a fifth of this is potentially productive. With a large and growing population and such a small proportion of the country producing food, great efforts have been made to expand the cultivated land and the food grown thereon. In 1946, about 225 million acres of land were cultivated; by 1957 this had been increased to 276 million and by now must exceed 300 million acres. In 1936 150 million tons of grain and soybeans and 0·85 million tons of cotton were produced; by 1951 output was respectively 145 and 1·04 million, and by 1959, 280 and 2·41. There have also been large increases in livestock, especially sheep, goats and pigs. One of the principal factors in this expansion has been the social and economic organisation of the country's agriculture.

In the nineteen-thirties the average Chinese farm was only 3·3 acres divided into five or six strips. While many farmers owned their land, crop failures and high taxation forced them to borrow money, and left many of them permanently in debt. The peasant tilled his land with great care, but with primitive tools. If he could produce any crops for sale their marketing was difficult and war and natural hazards passed over his land. A Land Reform movement began in the thirties, but only on a large scale after 1949 and by 1953 there had been a redistribution of land between the landlords and rich peasants and the poor peasants and the landless. Production did not increase as a result, and the next step was that a few households combined to work each other's land in turn (called Mutual Aid Teams). This became a year-round system and not just a ploughing and harvesting team. These teams grew in size within a village and it was natural for implements and draught animals to become common property. From 1954 the principle was taken a stage further with the formation of Agricultural

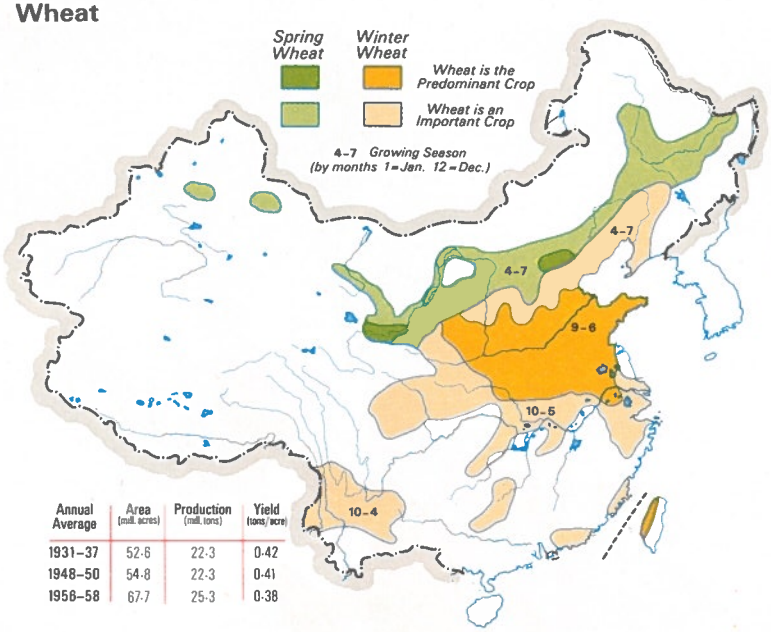
Producers' Co-operatives. More people formed each unit (*c.* 500) and their land, stock and implements, and labour were pooled, and their efforts directed by a management committee. The most advanced form of A.P.C. was when everything was common property except the peasant's house, small vegetable plot and certain rudimentary tools. The final stage, from 1958, was the combination of a number of co-operatives into a Commune, forming a unit of about 20,000 people. The Commune creates a Production Plan which it discusses with the Central State Planning body; it in turn delegates tasks to Production Brigades (2,300 households) who in turn control a series of Production Teams (20–30 households) who have an agreed agricultural output to achieve each year. The size of the Commune, unlike previous units, is sufficiently large to organise large irrigation schemes, accumulate capital, to buy and maintain machinery, organise the marketing of crops, improve communications and sponsor the introduction of new machinery, seed, fertilisers and insecticides. The Commune "is the basic unit of organisation in the countryside, combining industry, agriculture, commerce, education and culture and military affairs". One important feature of the Communes has been the organisation of communal kitchens and nurseries, freeing many women to work on the land.

Scattered throughout China are about 2,500 very large State Farms which have usually been created by ex-Servicemen in marginal, newly drained or cleared land. These can become models of new agricultural methods to the surrounding farms.

Technical and scientific progress have accompanied this reorganisation of agriculture in the effort to increase Chinese food production. Irrigation has extended agriculture into drier areas, especially in the north and in Sinkiang, it has given a sure base to agriculture where the rainfall is highly variable and has allowed the expansion of cultivation in the traditional farming areas, particularly an increase in the high yielding rice acreage. Dams, dyke building and strengthening, and the

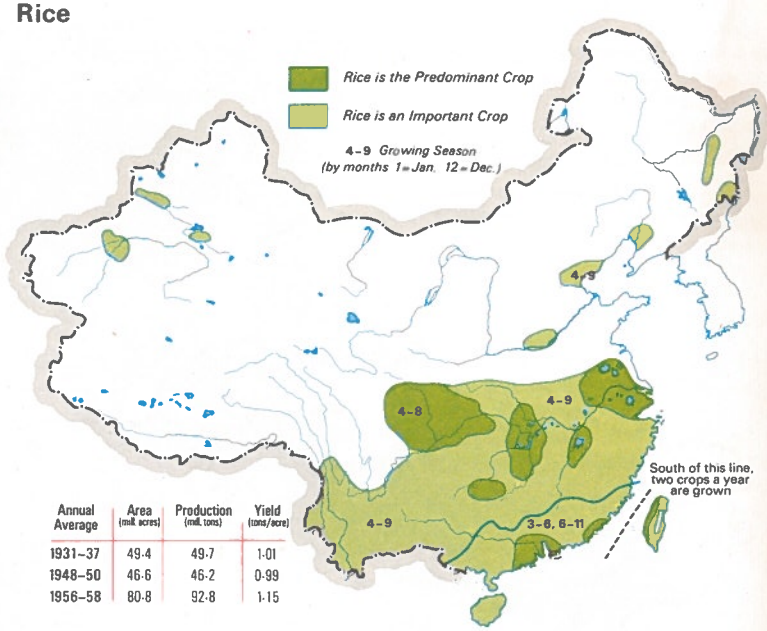
1:50,000,000 0 500 1000 1500 miles; 0 500 1000 1500 2000 kilometres

Wheat



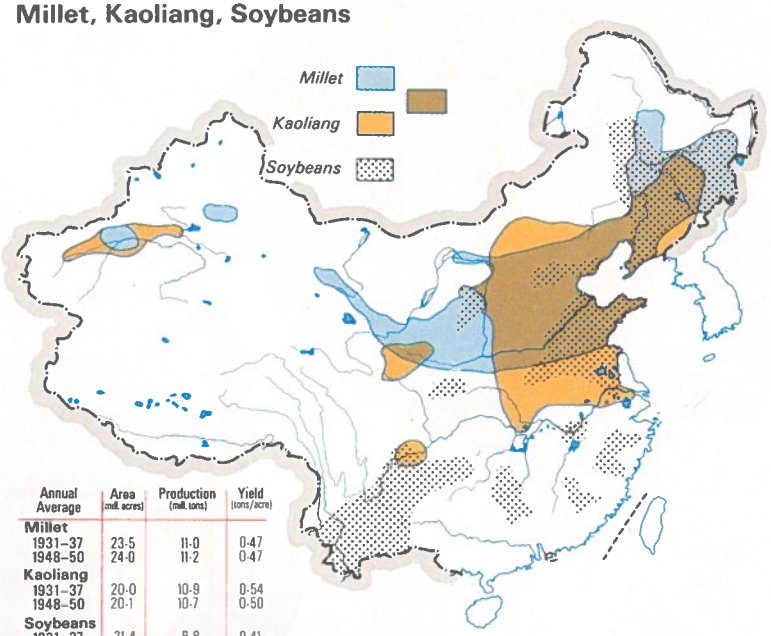
Annual Average	Area (mill. acres)	Production (mill. tons)	Yield (tons/acre)
1931–37	52·6	22·3	0·42
1948–50	54·8	22·3	0·41
1956–58	67·7	25·3	0·38

Rice



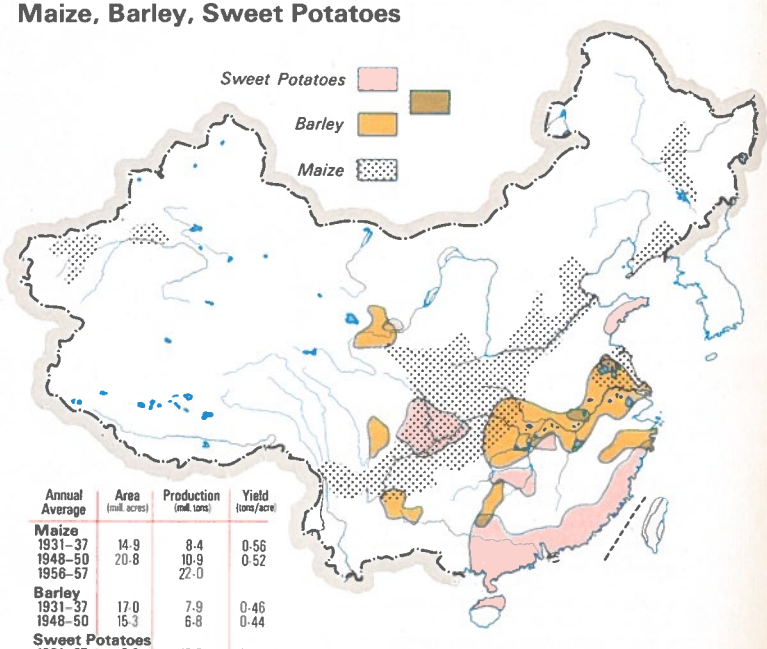
Annual Average	Area (mill. acres)	Production (mill. tons)	Yield (tons/acre)
1931–37	49·4	49·7	1·01
1948–50	46·6	46·2	0·99
1956–58	80·8	92·8	1·15

Millet, Kaoliang, Soybeans



Annual Average	Area (mill. acres)	Production (mill. tons)	Yield (tons/acre)
Millet			
1931–37	23·5	11·0	0·47
1948–50	24·0	11·2	0·47
Kaoliang			
1931–37	20·0	10·9	0·54
1948–50	20·1	10·7	0·50
Soybeans			
1931–37	21·4	8·8	0·41
1948–50	18·2	7·6	0·42
1962–63	32·1	10·1	0·32

Maize, Barley, Sweet Potatoes



Annual Average	Area (mill. acres)	Production (mill. tons)	Yield (tons/acre)
Maize			
1931–37	14·9	8·4	0·56
1948–50	20·8	10·9	0·52
1956–57		22·0	
Barley			
1931–37	17·0	7·9	0·46
1948–50	15·3	6·8	0·44
Sweet Potatoes			
1931–37	5·8	18·2	3·1
1948–50	7·7	24·4	3·1

COPYRIGHT GEORGE PHILIP & SON LTD

construction of canals can control floods, irrigate fields, develop water-power and facilitate transport. Afforestation, deep and contour ploughing can also be features of an irrigation scheme. Wherever possible construction work has been done with large numbers of people using simple tools and some schemes have employed a labour force of over a million. Irrigation has been equally encouraged at the village level. Irrigation is extremely important to China since it can offer a number of approaches to increased food production and have a broad economic effect upon the country.

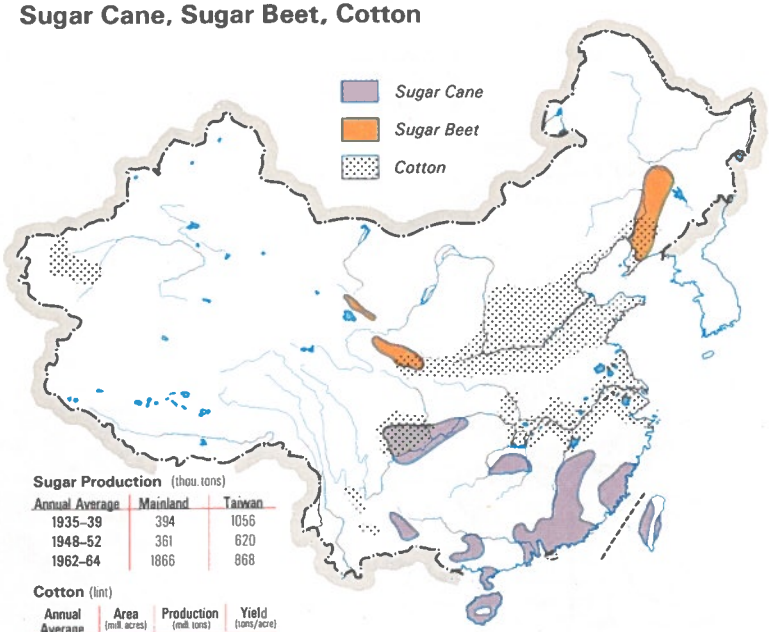
The soil has been maintained in a highly fertile state for centuries by the large scale application of human and animal manure and lake and canal mud. New methods of maturing the fertiliser using less labour, and sterilising methods preventing the transmission of human disease, have been introduced. Chemical fertilisers have been imported and domestic production is slowly growing. Insecticides and other disease controls have been developed. Rinderpest and Anthrax have been almost eradicated, and lake and swamp drainage, chemicals and the aircraft to spray them have reduced locust plagues.

Improved strains of grain have been developed to increase crop yields, harden certain plants to disease, to need less moisture and to mature in a shorter growing season. Rice is a good example; new 'short season' seed has enabled the crop to be more widely grown in Manchuria and also has allowed two crops per year to be harvested further north than previously.

Mechanization of agriculture has been slow, owing to a slow development of heavy industry and the availability of a large human labour force, although tractor stations have been established. There has been rather an emphasis on improvement which can be simply made to ordinary tools – deeper ploughs to increase water retention in the soil, tools in lighter materials, new water wheels and pumps, rubber wheels and ball bearings. Increased mechanization will of course further increase food production.

1:50,000,000 0 500 1000 1500 miles; 0 500 1000 1500 2000 kilometres

Sugar Cane, Sugar Beet, Cotton



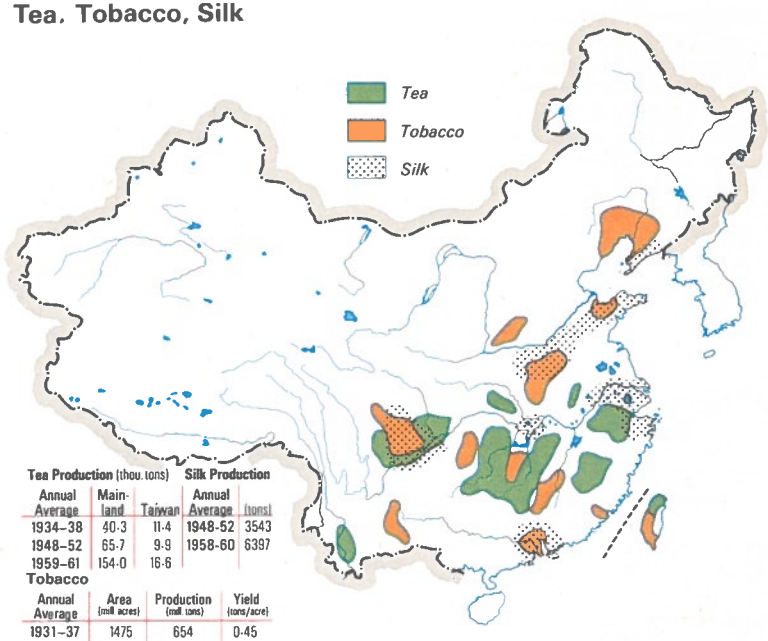
Sugar Production (thou. tons)

Annual Average	Mainland	Taiwan
1935–39	394	1056
1948–52	361	620
1962–64	1866	868

Cotton (lint)

Annual Average	Area (mill. acres)	Production (mill. tons)	Yield (tons/acre)
1934–38	7·4	0·7	0·09
1948–52	10·9	0·9	0·08
1955–57	14·6	1·5	0·10

Tea, Tobacco, Silk



Tea Production (thou. tons)

Annual Average	Mainland	Taiwan
1934–38	40·3	11·4
1948–52	65·7	9·9
1959–61	154·0	16·6

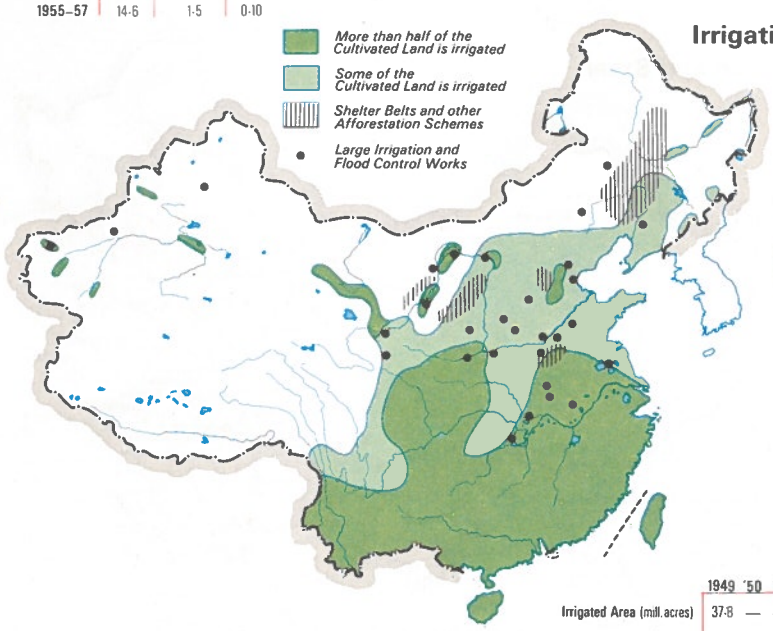
Silk Production

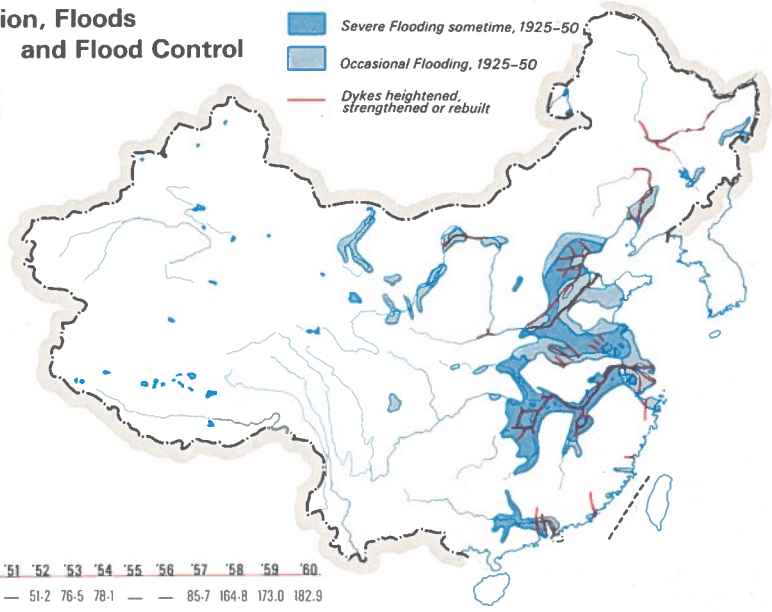
Annual Average	(tons)
1948–52	3543
1958–60	6397

Tobacco

Annual Average	Area (mill. acres)	Production (mill. tons)	Yield (tons/acre)
1931–37	1475	654	0·45
1948–50	1374	620	0·45
1959		415	

Irrigation, Floods and Flood Control


More than half of the Cultivated Land is irrigated
Some of the Cultivated Land is irrigated
Shelter Belts and other Afforestation Schemes
Large Irrigation and Flood Control Works

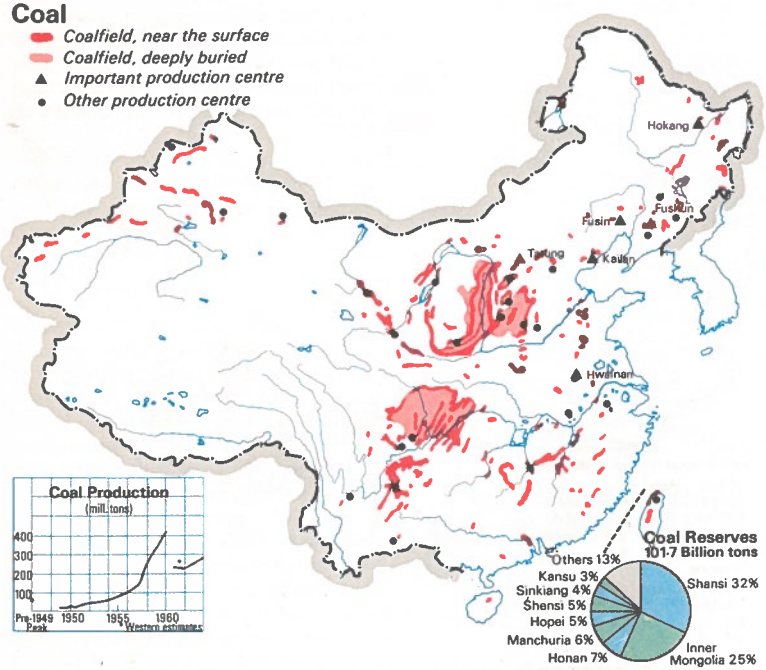


	1949	'50	'51	'52	'53	'54	'55	'56	'57	'58	'59	'60
Irrigated Area (mill. acres)	37·8	—	—	51·2	76·5	78·1	—	—	85·7	164·8	173.0	182.9
Flooded Area (mill. acres)	21·3	11·6	3·7	4·6	7·9	9·1	6·7	27·5	14·1			
Estimated Food loss (mill. tons)	6	2·5	3	—	7·5	9	6·5	12	—			

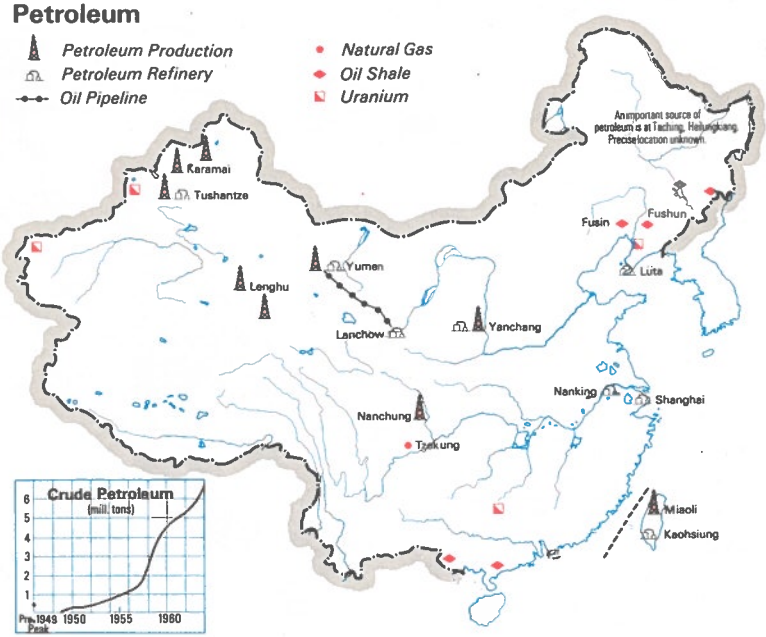
COPYRIGHT GEORGE PHILIP & SON LTD

1:50,000,000 0 500 1000 1500 miles / 0 500 1000 1500 2000 kilometres

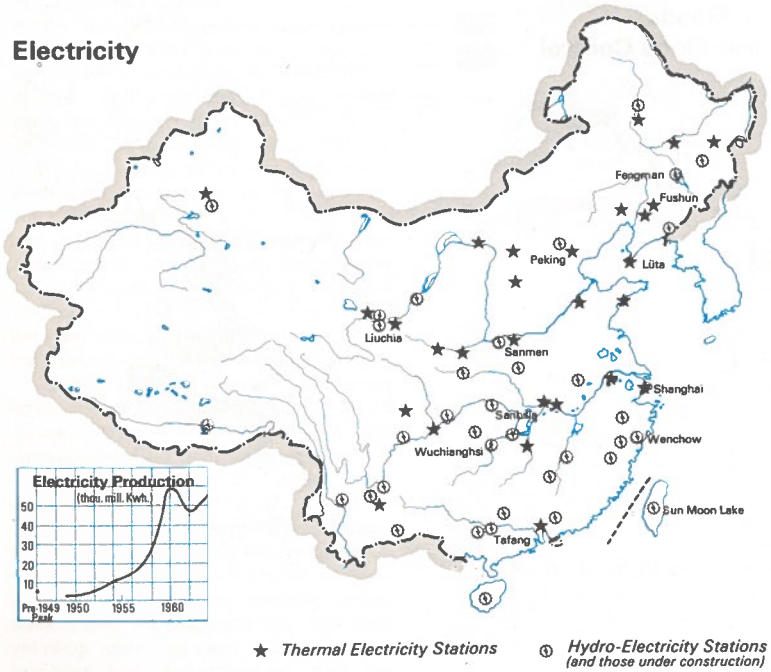
Coal



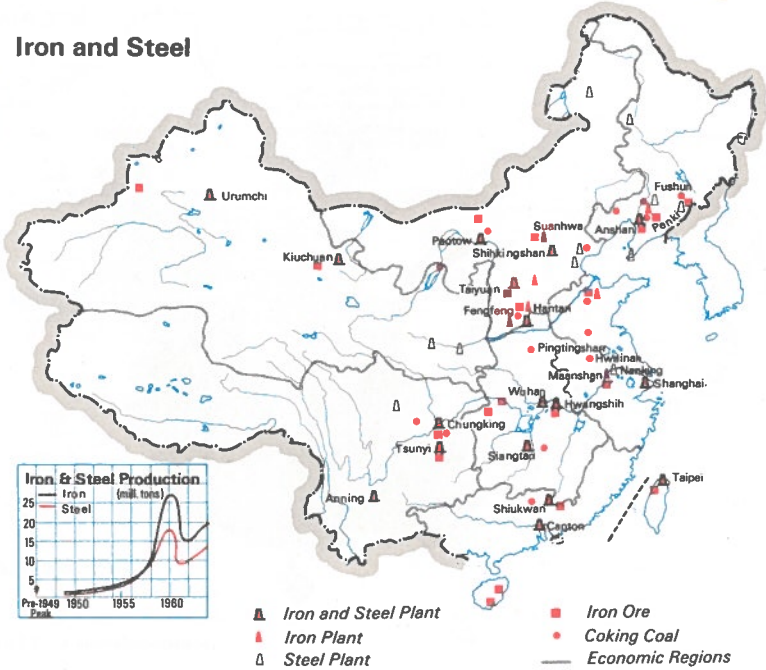
Petroleum



Electricity



Iron and Steel



COPYRIGHT GEORGE PHILIP & SON LTD

Owing to the years of war and devastation, industry was in ruins when the Communist government was formed in 1949. Following the Soviet model, the expansion of heavy industry was seen as a necessary first stage in the improvement of agriculture and priority was given to its rehabilitation (First Five Year Plan, 1953–57). New projects, as far as possible, were to be located in inland sites forming the backbone for industrialisation in each of the new Economic Regions. In 1958 the Government encouraged small-scale local industries especially iron and steel and the resultant increase in industry and agriculture with its accompanying political fervour was known as the Great Leap Forward. By 1959, after a series of bad harvests and the withdrawal of Russian aid, equal priority in the National Plan was given to agriculture. In the early sixties industrial expansion recovered, but production was not as high as in 1958/59. No results were published of the Second Five Year Plan (1958–1962) and the beginning of the Third was postponed until 1966.

China has some of the largest coal reserves in the world, and is among the major producers. Each province has some coal, though over half the known reserves lie in the Tatung basin, in north Shansi; Manchuria and the lower Hwang Ho are the main producing areas. The 1949 production of 30 million tons had increased to probably about 200 million tons by 1960*.

The main oilfields are in Kansu, Sinkiang, Tsinghai and in Heilungkiang; small quantities are produced, and oil is imported from Russia. There are supplies of natural gas in Szechwan and oil-shale in Manchuria and Southern China.

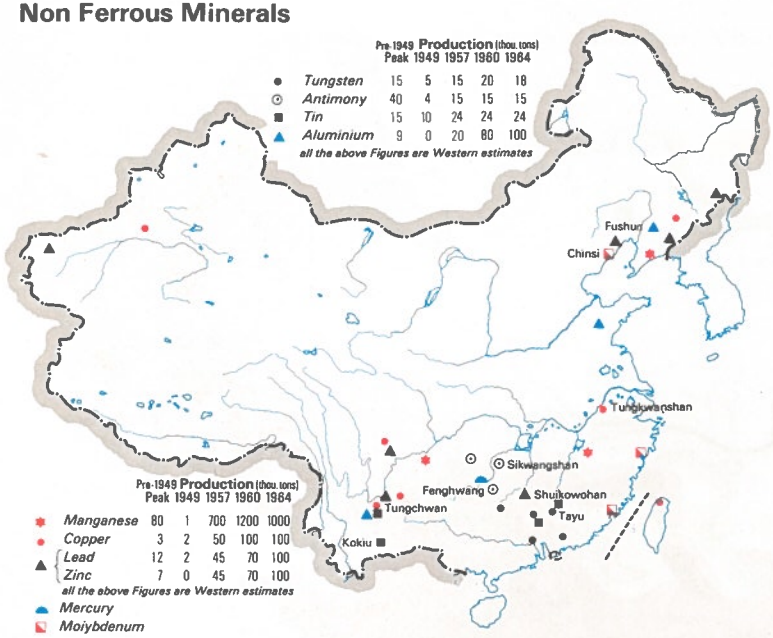
Electricity production has increased tenfold, 1949–59. New and larger thermal plants on the coalfields and hydro-electric plants, especially in the coal-poor areas, have been developed. Many of the Chinese rivers have ideal hydro-dam sites and both large and small plants have been developed, accounting for about a fifth of the total electricity production.

China possesses sufficient though

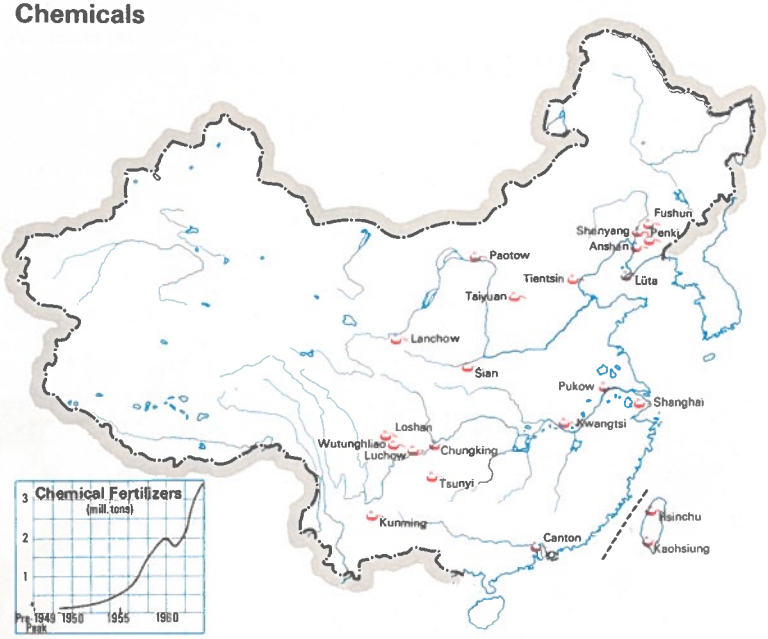
* Chinese sources, heavily discounted, state 420 mill. tons mined.

1:50,000,000 0 500 1000 1500 miles / 0 500 1000 1500 2000 kilometres

Non Ferrous Minerals



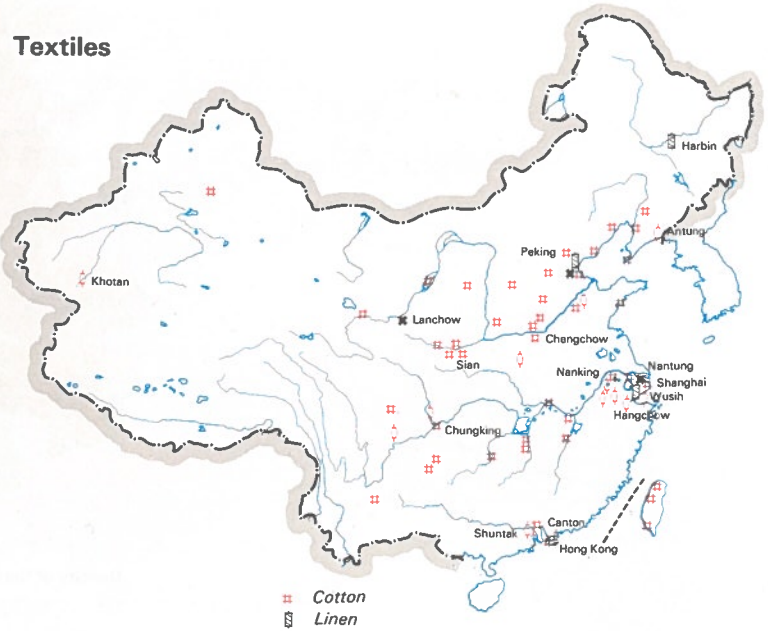
Chemicals



Machinery

Railway Equipment
Mining Machinery
Textile Machinery
Agricultural Machinery
Diversified
Machine Tools
Shipbuilding
Motor Vehicles

Textiles



Cotton
Linen
Wool
Silk

COPYRIGHT GEORGE PHILIP & SON, LTD.

poor quality iron ore. Before 1949 two-thirds of the iron and steel plants were in South Manchuria. The first Five Year Plan concentrated on the reconstruction and expansion of existing plant (expansion at Anshan, Wuhan, Taiyuan and Chungking, blast furnaces added at Shanghai and Chungking and steel plant at Penki and Maanshan). In the second Five Year Plan new plants were set up throughout the country and the industry lost its marked easterly location (steel plants begun at Fushun, Dairen and in Heilungkiang and Kirin; large iron works at Suanhwa; integrated plants at Paotow, Kiuchuan and Hwangshih near Wuhan). Small scale local production was encouraged and provided 25 per cent of the total output.

China is, geologically, relatively unexplored and to date there is no self-sufficiency in all minerals. China is among the world's leading producers of tungsten, antimony and tin and is self-sufficient in salt, molybdenum and perhaps bauxite. Copper, mercury, lead, zinc and manganese are also produced, and many of these minerals are found in just the areas where water power is available to smelt them. China is probably short of chromium, cobalt and nickel.

In a country wishing to industrialise rapidly, the machine-manufacturing industry is very important, and during the first Five Year Plan over 60 new plants were constructed. While large centres of the industry are still located in Shanghai, Shenyang and Tientsin, new centres have developed inland at Lanchow (mining equipment) and Sian (textiles) for example. New industries include the manufacture of cars, lorries, tractors, aircraft and electronic and electrical equipment. The chemical industry began by using the by-products of the Manchurian iron plants, but now fertilizer, rubber, dyestuffs, synthetic fibres and plastics factories exist throughout the country. Cotton is the most important branch of the textile industry: it has been expanded and new factories have been established within the cotton growing area, although Shanghai is still the leading cotton centre (as it is for wool and silk).

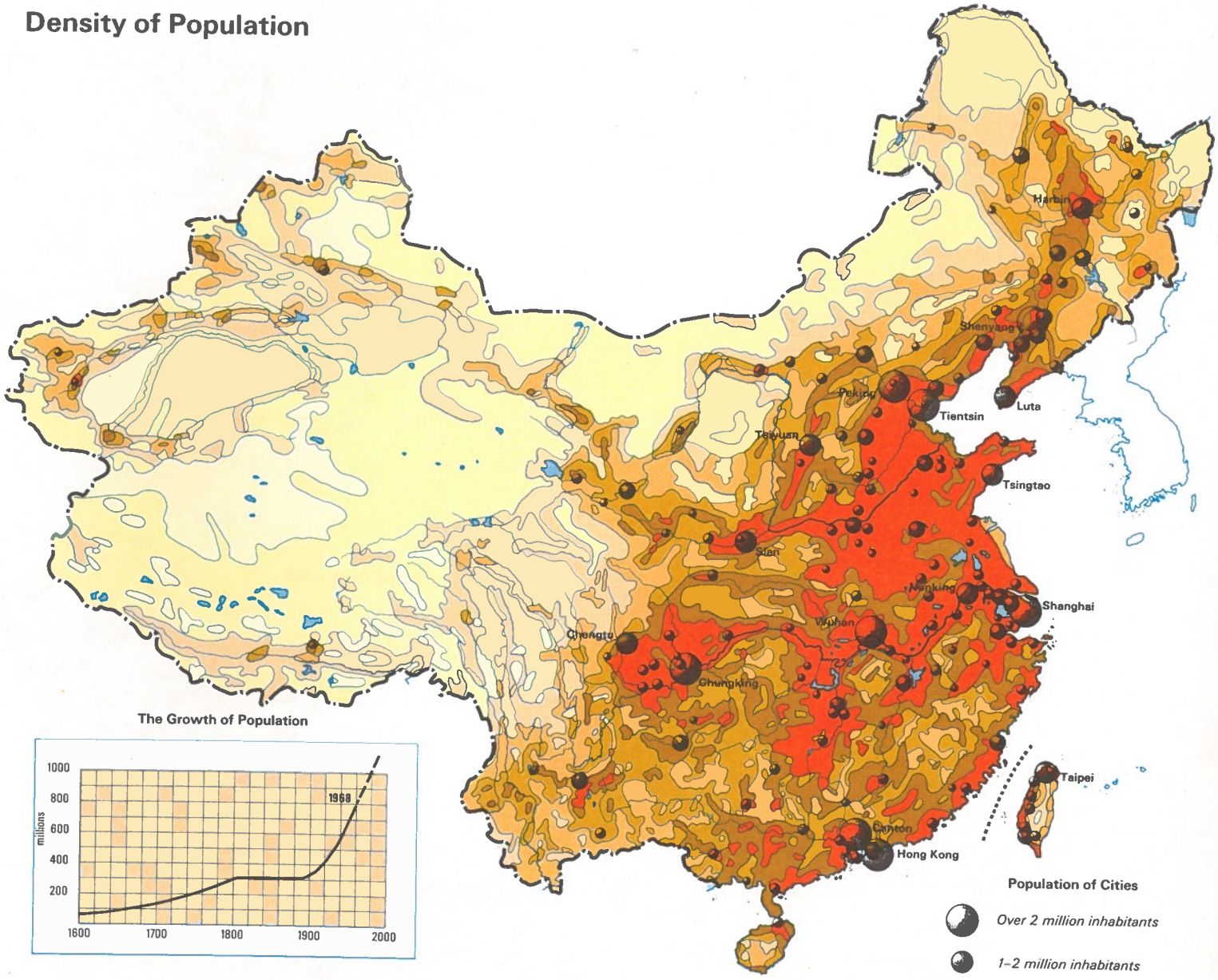
The estimated population of China in 1800 was 300 millions and in 1910 340 millions. This slow growth is explained by the staggering losses in war, floods and famine. These terrible calamities continued into the present century but with less ferocity and the central government, when it was able, took remedial and preventive measures against them. By 1949 the population was about 540 millions, at the 1953 census it was 583 millions, and today it is probably over 700 millions. China will probably reach 1,000 millions by 1980. In the decade 1950–60 China was among those countries that had the highest rate of population growth. In the 1930's the Chinese birth rate was about 40 (per 1,000), the death rate about 35 giving a natural increase of 5 per annum. In 1952 the birth rate was 37 and death rate 18 (N.I. – 19), and by 1957 the birth rate 34 and the death rate further reduced to 11 per 1,000 (N.I. – 23). In the cities there were higher birth rates and lower death rates giving a natural increase of over 30 per 1,000.

The reasons for the rapid growth in recent years are not difficult to find. Food acreage and production has increased and in hard times grain has been imported. Dyke heightening and building, reservoir construction and afforestation have prevented floods; sanitation, water supply and medical care have been improved, and many pests eradicated. China has a very young population producing a high birth rate and low death rate. In the communist era, the old economic barrier to early marriage has been removed. Even a birth control programme, introduced in a near-famine panic in 1954, was officially ended in 1958. Emigration from China, discounting the estimated 50,000 refugees per year fleeing to Hong Kong and Macao, has ceased, and perhaps most important of all, China has known internal peace for nearly twenty years.

Only 10 per cent of China is cultivated, and as 85 per cent of China's population is supported by agriculture, it means that dense populations are found on the cultivated areas – Manchuria, the lowlands of the Hwang

1:25,000,000 0 200 400 600 800 miles; 0 300 600 900 1200 kilometres

Density of Population



The Growth of Population

Population totals and densities for the Provinces appear inside the back cover

COPYRIGHT GEORGE PHILIP & SON LTD

1:50,000,000 0 500 1000 1500 miles / 0 500 1000 1500 2000 kilometres

Ho and Yangtze, the Szechwan basin and around the southern coastal fringes – and the greater proportion of China is very sparsely peopled.

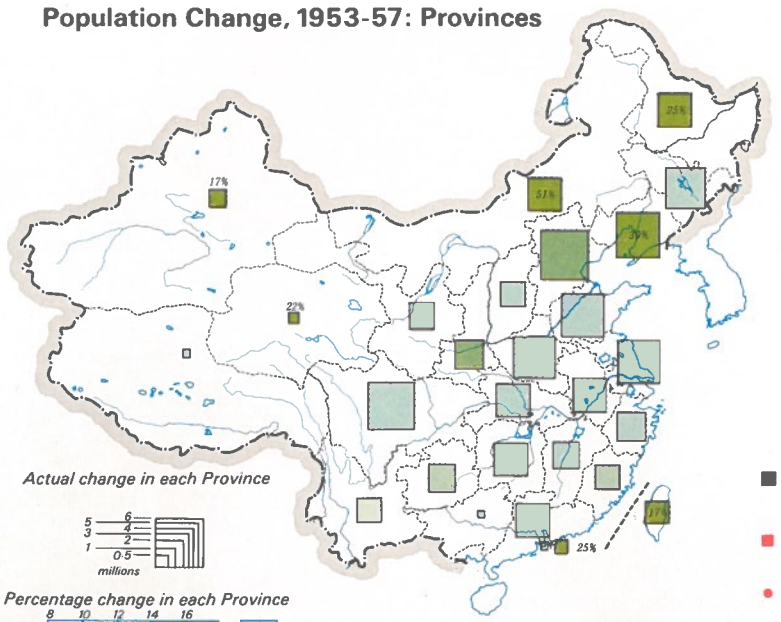
Most of the people live in thousands of small agricultural villages and market towns, and only about 15 per cent live in industrial towns and cities, which although a small proportion, is about 100 millions, and includes sixteen cities with over a million inhabitants, and about 120 with over 100,000. All of the 'million cities' except Harbin, are located on or near (within 150 miles) the coast, on the Hwang Ho or Yangtze or a tributary. The largest town in the whole of the western half of the country is Urumchi with 350,000 people, and the only 'million city' south of the Yangtze is Canton.

Population figures for the cities and towns for 1953 and 1958 are available, and their growth can be studied. The expansion of mining and industry and the collectivization of agriculture caused the city population, on the whole, to increase. Vigorous population growth has taken place in the new centres of northern and central China as well as in the very large older economic centres. At times the migration to the towns got out of hand, and by 1958 the urban 'blind flow' by the peasants was regulated, many people being sent back to help in the fields or to occupy virgin lands.

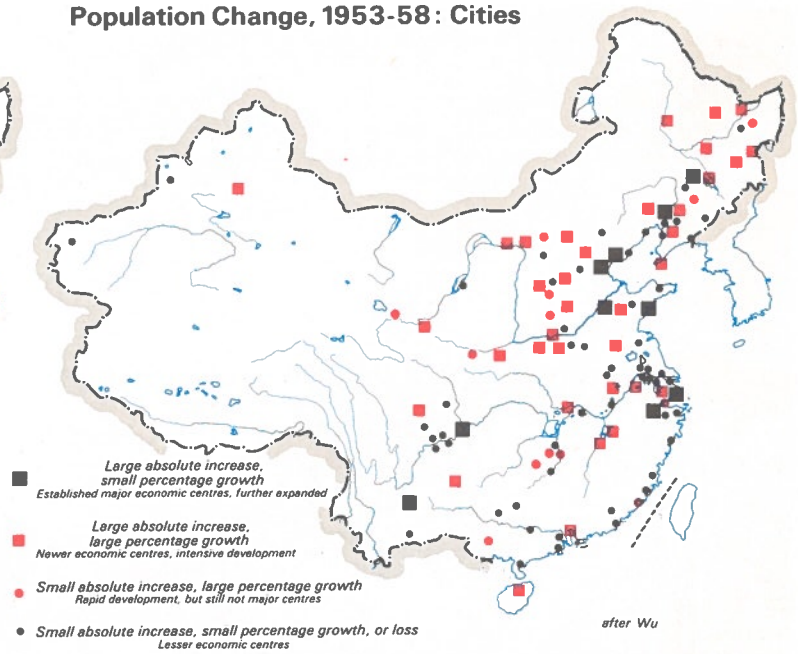
The 1953 Census reported that 94 per cent of China's population were Chinese or Han peoples, living in lowland China. Among the remaining 6 per cent who occupy over half the country, there are two minority Chinese speaking groups. The remainder of China is inhabited by national groups which spread over the international boundary, Mongols and Koreans in the north, Thais in the south-west and Russian groups in Sinkiang.

The Chinese written language is used and understood throughout the country, but the spoken language has many marked dialects, the principal being Mandarin. A number of dialects exist in the south-east, and it is the more southern of these that are spoken by the 12 million or so Chinese who have emigrated throughout the world from these parts.

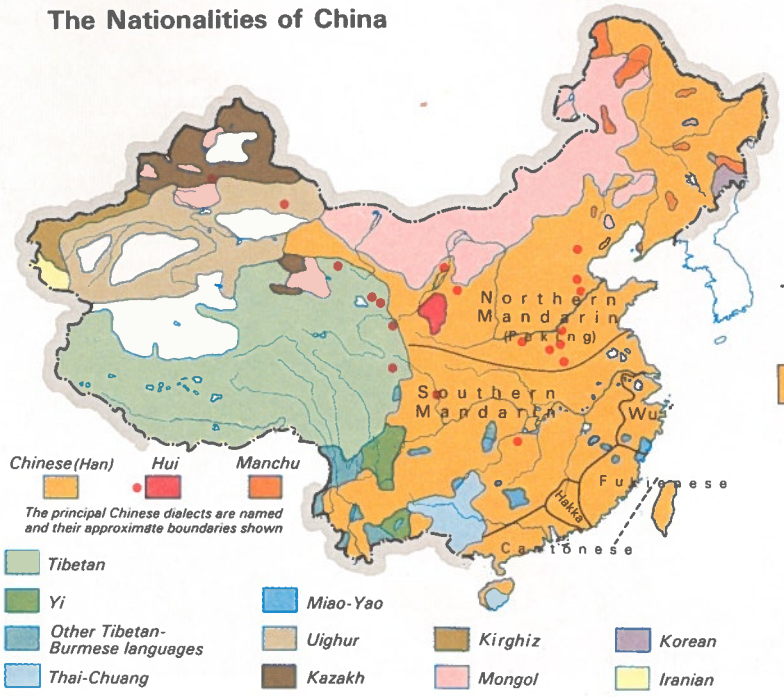
Population Change, 1953-57: Provinces



Population Change, 1953-58: Cities

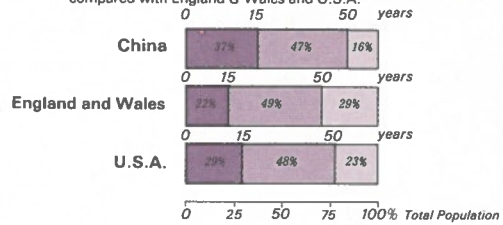

Large absolute increase, small percentage growth
Established major economic centres, further expanded
Large absolute increase, large percentage growth
Newer economic centres, intensive development
Small absolute increase, large percentage growth
Rapid development, but still not major centres
Small absolute increase, small percentage growth, or loss
Lesser economic centres
after Wu

The Nationalities of China

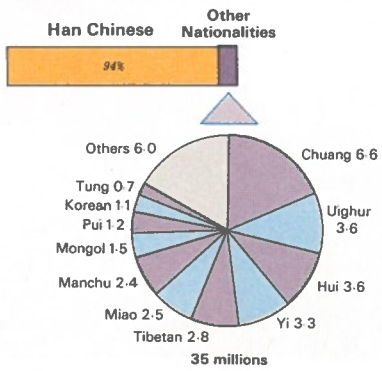


The Age of the Population, 1953

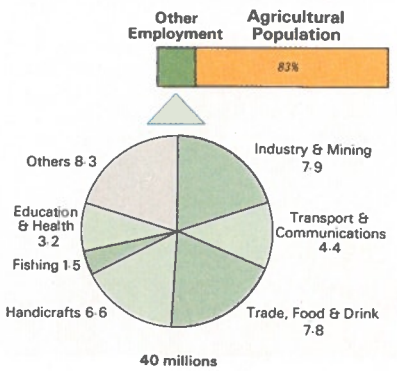
compared with England & Wales and U.S.A.



The Nationalities of China, 1953



The Employment of the Population, 1957



COPYRIGHT GEORGE PHILIP & SON LTD